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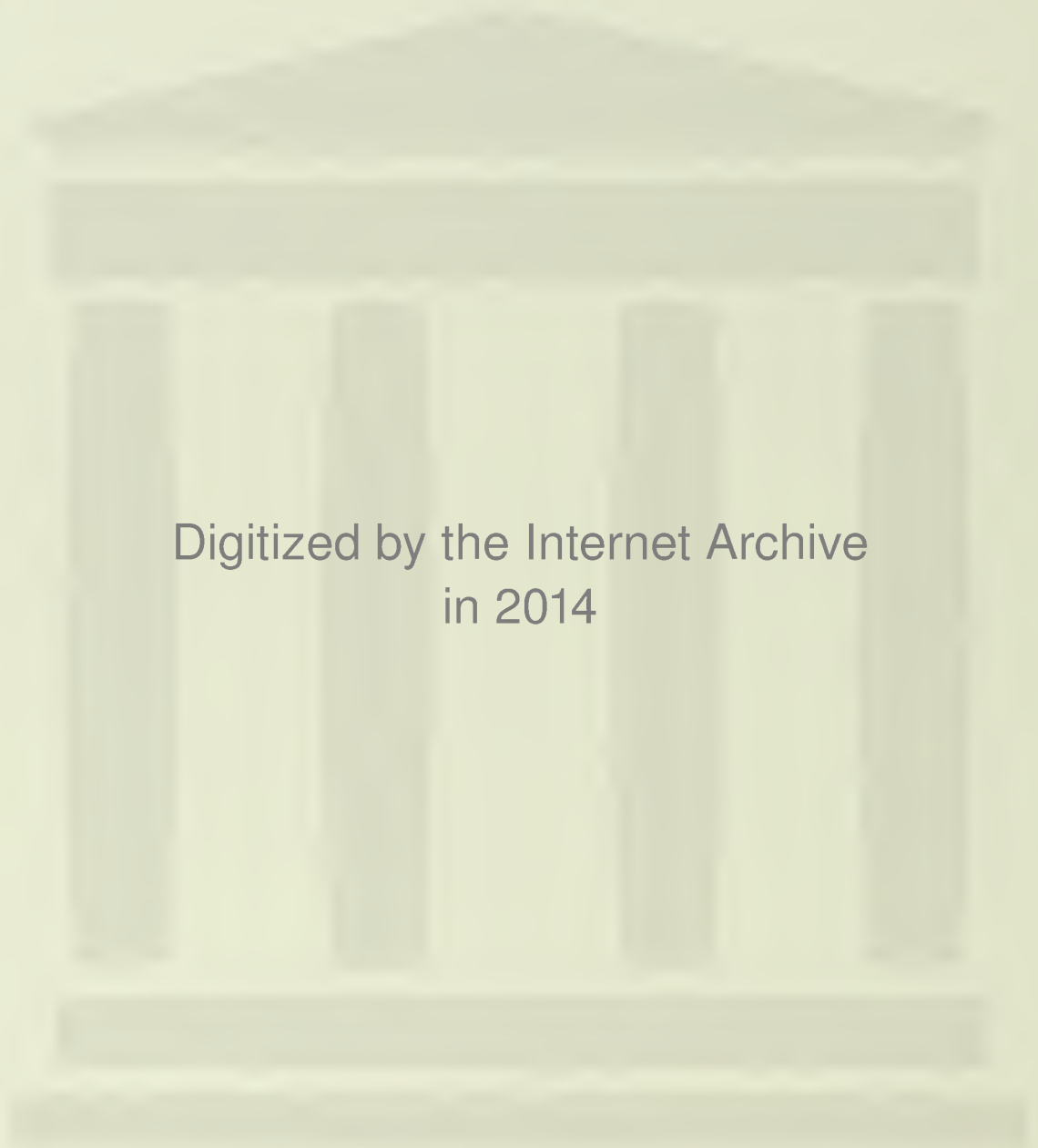
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Massachusetts
# HIV/AIDS Quarterly Review

A newsletter of the AIDS Bureau and AIDS Surveillance Program
Vol. 1, No. 1 1st Quarter April, 1994

## WOMEN AND AIDS: EFFECTS OF THE REVISED AIDS CASE DEFINITION

The AIDS surveillance definition has evolved to more accurately reflect the number of people with HIV-related morbidity. The changes help providers to identify the clinical conditions suggestive of HIV infection and to provide better prophylactic and therapeutic interventions. The most recent case definition was implemented January 1, 1993. In addition to retaining 23 clinical conditions in the previous AIDS surveillance definition, the expanded definition includes pulmonary tuberculosis (TB), recurrent pneumonia, and invasive cervical cancer. It also includes persons with CD4+ T-lymphocyte counts of < 200 cells per $mm^3$ or a CD4+ percentage of total T-cells of <14%. The expanded case definition has led to an increase in women being reported with AIDS. The purpose of this article is to examine the basis of this increased reporting in women and to describe how new definition cases in women differ from old definition cases.

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In general, AIDS cases reported based on conditions added to the definition in 1993 ("new definition" cases) closely resemble recently diagnosed "old definition" cases (those reported based on pre-1993 defined conditions) with regards to risk behavior and demographic variables, since additions made to the case definition represent people with more recently acquired HIV infection. People of color, injection drug users, and women all make up fast-growing segments of the population with HIV infection, and are more likely to be reported with conditions added in 1993.

**Conditions added to the 1993 case definition better represent the spectrum of HIV infection in women.**

As of April 1, 1994, 8, 669 AIDS cases were reported to the Massachusetts AIDS Surveillance Program. Of the 7,286 cases in men, 20% were reported on the basis of the new case definition, whereas of the 1,383 cases in women, 29% were reported based on the new case definition (Figure 1). Since, in general, women have acquired HIV infection more recently than men, who make up the bulk of cumulative cases meeting the old case definition, the new case definition provides important epidemiologic information about AIDS and HIV infection in women.

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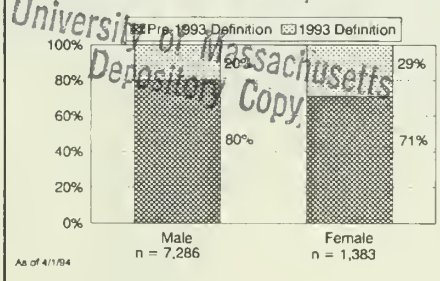
Figure 1. AIDS Cases by Case Definition




**Women of color are disproportionately affected by the AIDS epidemic.**

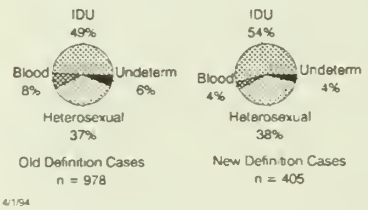
Whites account for 65% of all cases that meet old definition criteria, Blacks 21% and Latinos 13%. Among new definition cases, Whites make up 53%, Blacks 26% and Latinos 21%. However, among females there is little difference in racial distribution of old and new definition cases. Among old definition cases in women, 39% are White, 38% are Black, and 22% are Latina, and among new definition cases, 39% are White, 36% are Black, and 25% are Latina.

**The new case definition has resulted in an increased association of AIDS with IDU.**

Massachusetts AIDS cases that met the new case definition were increasingly associated with injection drug use

(IDU). Among the old definition cases, 26% were attributed to injection drug use, while 46% of new definition cases were categorized as due to this mode of transmission. For women, the new case definition strengthened the association of IDU with HIV infection, even with the rapid growth of heterosexual transmission of the virus. Among female AIDS cases, 54% of new definition cases and 49% of old definition cases were attributed to IDU (Figure 2).

Figure 2. Modes of Transmission in Female Adolescent and Adult AIDS Cases




**Women with AIDS are more likely than men with AIDS to reside outside of Boston.**

The new case definition accentuates the observation that women with AIDS in Massachusetts are more likely than men with AIDS to reside outside of Boston. The trend on the whole is toward broader geographic distribution of the epidemic; the greatest percentage of old definition cases listed the city of Boston as residence at time of diagnosis (37%), while 34% were from cities surrounding Boston, 24% were from other parts of the state, and 5% were from out of state. In contrast, 34% of new definition cases lived in Boston at time of diagnosis, while 25% lived in cities surrounding Boston, 40% were from other parts of the state, and 1% were from out of state. This trend is more marked in women; among female cases, the largest percentage of both old and new definition cases reside outside of Boston and its surrounding areas (43% and 46%, respectively).

**The majority of new definition cases in women (as in men) met the new definition based on low CD4+ counts.**

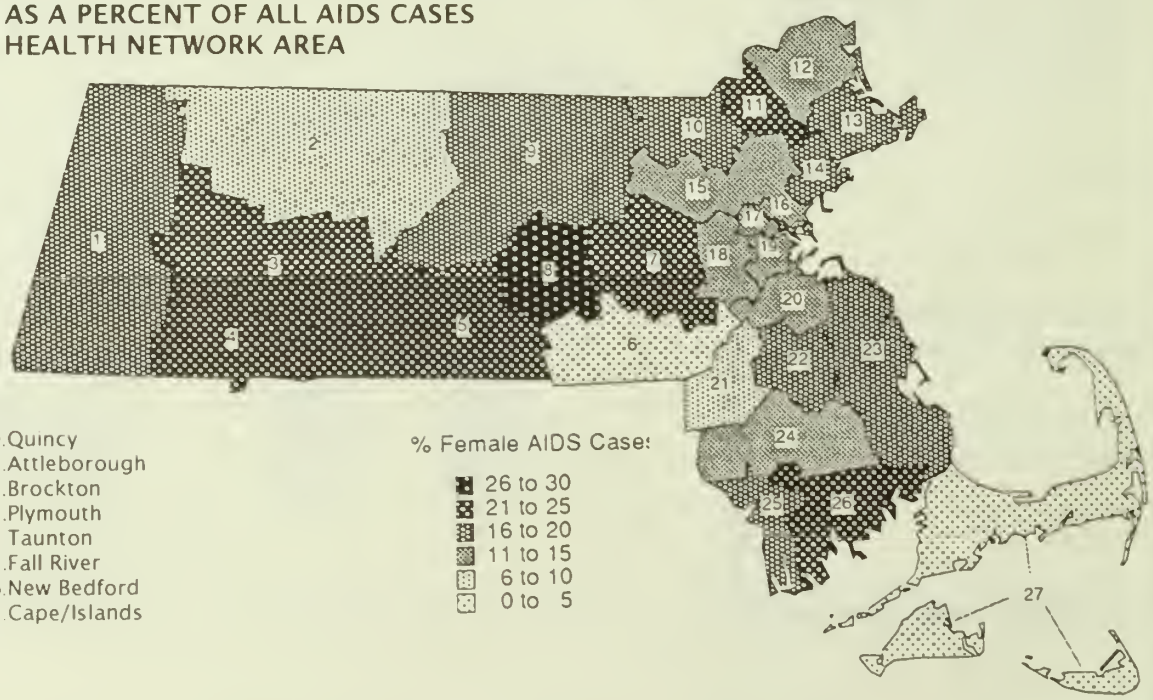
For all AIDS cases meeting the new case definition, the majority were reported based on low CD4+ counts (95%). A small percentage of new definition cases were diagnosed on the basis of recurrent pneumonia or pulmonary tuberculosis (5%). Less than five of the 405 women who met the new case definition did so with a diagnosis of cervical cancer.

The association of dysplasia and cancer of the cervix with HIV in women prompted the addition of invasive cervical cancer as an AIDS-defining condition with considerable medical implications. The addition of this condition highlights the importance of regular gynecologic primary care in women at risk of HIV infection. While few women were reported as AIDS cases because of cervical cancer, it is expected that broader recognition of HIV infection in women and its impact on women's health will result in more cases identified.

The AIDS epidemic in Massachusetts continues to evolve. Since the new case definition includes conditions that identify those who are more recently infected with HIV, such as women, it provides more information about the directions of the epidemic.

## AIDS CASES IN WOMEN AS A PERCENT OF ALL AIDS CASES BY COMMUNITY HEALTH NETWORK AREA

1. Pittsfield
2. Greenfield
3. Holyoke/Chicopee Northampton
4. Springfield
5. Southbridge
6. Milford
7. Framingham/Marlborough
8. Worcester
9. Fitchburg/Gardner
10. Lowell
11. Lawrence
12. Haverhill
13. Beverly/Gloucester
14. Lynn/Salem
15. Woburn
16. Medford/Malden
17. Cambridge/Somerville
18. Newton/Waltham
19. Boston
20. Quincy
21. Attleborough
22. Brockton
23. Plymouth
24. Taunton
25. Fall River
26. New Bedford
27. Cape/Islands



# HEALTH CARE UTILIZATION FOR AIDS AND HIV DISEASE IN WOMEN IN MASSACHUSETTS, 1988-1992

Between 1988 and 1992, the number of women infected with HIV increased dramatically in Massachusetts. Although the number of men infected with HIV also increased during this time period, there was a greater impact on the utilization of inpatient health care services by women as reflected by the data available in the Uniform Hospital Discharge Dataset (UHDDS). The UHDDS, maintained by the Massachusetts Rate Setting Commission, includes all hospital discharges from voluntary and municipal acute care hospitals, and excludes discharges from chronic, psychiatric, federal, and state hospitals.

According to the UHDDS, between 1988 and 1992 the total number of AIDS/HIV related acute hospital discharges for women in Massachusetts increased by 194%, from 597 in 1988 to 1,756 in 1992, while for men it increased by 138%, from 2,205 in 1988 to 5,256 in 1992. During this same time period, the number of female AIDS/HIV patients discharged from Massachusetts acute care hospitals increased by 209%, as compared to an increase of 137% in the number of male AIDS/HIV patients discharged from acute care hospitals in the Commonwealth. For both women and men, the increase in the total number of AIDS/HIV related acute hospital discharges appears to be attributed to the increase in the number of AIDS/HIV patients.

Of the AIDS/HIV related acute hospital discharges for women in 1992, 46.1% were White, 29.8% were Black, and 19.2% were Hispanic. While the proportion of White females increased 19.8% between 1988 and 1992 from 38.4% to 46.1%, the proportion of Black females decreased by 35.2% during this same time period from 46% in 1988 to 29.8% in 1992. Most dramatically, the portion of Hispanic AIDS/HIV related discharges increased by 215% between 1988 and 1992 from 6.1% in 1988 to 19.2% in 1992.

In comparison, the AIDS/HIV related acute hospital discharges for men in 1992 were 61% White, 20.9% Black and 13.7% Hispanic. The proportion of White male AIDS/HIV acute hospital discharges decreased by 11.8% between 1988 and 1992 from 69.2% to 61%, while the proportion of Black male AIDS/HIV related discharges increased by 27.4%, from 16.4% in 1988 to 20.9% in 1992. As with women, the most dramatic increase during this time period was noted in the Hispanic portion of the AIDS/HIV related acute hospital discharges, with an increase of 111% from 6.5% in 1988 to 13.7% in 1992.

While the total number of AIDS/HIV related acute care hospital discharges in women increased between 1988 and 1992, the average length of stay (ALOS) per hospital discharge decreased by 26%, from 12 days in 1988 to 8.9 days in 1992. The ALOS per AIDS/HIV related hospital discharge for men decreased by 28% from 11.8 days in 1988 to 8.5 days in 1992. However, the average number of acute hospital discharges per woman with AIDS and HIV disease per year decreased slightly and for men with AIDS/HIV disease, the average number of hospital discharges did not change during this same time period (see Table 1). In other words, both women and men with AIDS or HIV disease discharged from Massachusetts acute care hospitals have been staying in the hospital for fewer days during each hospital stay, but the number of hospital stays annually for each woman and man with AIDS/HIV has changed only slightly.

Statistics such as these comprise surveillance reports produced by the Massachusetts Department of Public Health on the utilization of health care services provided in Massachusetts by people with AIDS and HIV disease. The purpose of this ongoing series of reports is to provide basic information on AIDS/HIV health care service utilization for program targeting, planning, evaluation, and advocacy in order to develop a comprehensive portrait of health care service utilization by AIDS/HIV patients in Massachusetts.

**TABLE ONE: Indicators of Utilization of AIDS/HIV Related Health Care Services**

| | 1988 | 1989 | 1990 | 1991 | 1992 | % Decrease |
|---|---|---|---|---|---|---|
| **Average Length of Stay per Discharge (days)** | | | | | | |
| Female | 12 | 11.5 | 10 | 9.5 | 8.9 | 25.8 % |
| Male | 11.8 | 11.4 | 10.6 | 9.3 | 8.5 | 28 % |
| **Average Number of Discharges per Patient** | | | | | | |
| Female | 1.68 | 1.52 | 1.61 | 1.62 | 1.6 | 4.8 % |
| Male | 1.67 | 1.69 | 1.7 | 1.68 | 1.68 | NC |

## AIDS SURVEILLANCE SUMMARY

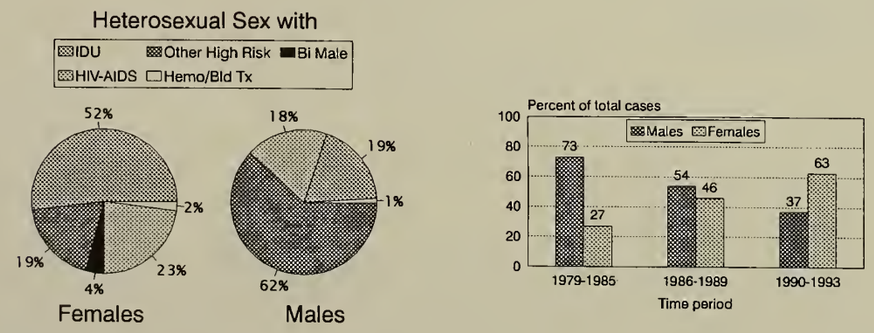
| | Massachusetts Diagnosed in '93 | | Massachusetts Cumulative | | United States* Cumulative | |
|---|---|---|---|---|---|---|
| Total Cases reported as of 4/1/94 | 1,326 | | 8,669 | | 361,509 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 1,310 | | 8,514 | | 356,275 | |
| Male Sex w/Male | 465 | 35% | 4,062 | 48% | 193,162 | 54% |
| Injecting Drug Use | 519 | 40% | 2,593 | 30% | 86,961 | 24% |
| Male/Male Sex & IDU | 34 | 3% | 326 | 4% | 23,483 | 7% |
| Hemophiliac | 9 | 1% | 135 | 2% | 3,134 | 1% |
| Heterosexual | 188 | 14% | 851 | 10% | 23,038 | 6% |
| Blood Transfusion Recipient | 10 | 1% | 165 | 2% | 6,304 | 2% |
| Undetermined | 85 | 6% | 382 | 4% | 20,193 | 6% |
| **Transmission Mode (Pediatric)** | 15 | | 155 | | 5,234 | |
| Mother w/AIDS/at risk for HIV | 15 | 100% | 135 | 87% | 4,710 | 90% |
| Hemophiliac | | | 11 | 7% | 213 | 4% |
| Blood Transfusion Recipient | | | 9 | 6% | 263 | 5% |
| Undetermined | | | | | 48 | 1% |
| **Gender** | | | | | | |
| Male | 1,038 | 78% | 7,286 | 84% | 314,627 | 87% |
| Female | 288 | 22% | 1,383 | 16% | 46,882 | 13% |
| **Mortality Status** | | | | | | |
| Alive | 1,189 | 90% | 3,762 | 43% | 140,638 | 39% |
| Dead | 137 | 10% | 4,907 | 57% | 220,871 | 61% |
| **Race/Ethnicity** | | | | | | |
| White | 702 | 53% | 5,418 | 62% | 181,358 | 50% |
| Black | 336 | 25% | 1,879 | 22% | 114,959 | 32% |
| Hispanic | 280 | 21% | 1,311 | 15% | 61,337 | 17% |
| Other/Unknown | 8 | 1% | 61 | 1% | 3,855 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 15 | 1% | 151 | 2% | 5,234 | 1% |
| 13 - 19 | | | 30 | 0% | 1,528 | 0% |
| 20 - 29 | 199 | 15% | 1,637 | 19% | 67,627 | 19% |
| 30 - 39 | 671 | 51% | 4,284 | 49% | 164,908 | 46% |
| 40 - 49 | 344 | 26% | 1,948 | 22% | 85,701 | 24% |
| Over 49 | 93 | 7% | 619 | 7% | 36,511 | 10% |

* Total U.S. Cases reported as of January 1, 1994: Figures are provisional. Heterosexual cases formerly based on Pattern II criteria are now classified as "Undetermined."

Blanks indicate less than 5 cases reported.

Fig 16

### Massachusetts AIDS Cases Acquired by Heterosexual Transmission Cumulative as of April 1, 1994




*Other high risk includes people born in a Pattern II country.

## WOMEN OF COLOR AIDS COUNCIL

Dr. Joycelyn Elders, U.S. Surgeon General, was the keynote speaker for the **Women of Color AIDS Council (WCAC) Summit** held April 8-9, 1994 at the World Trade Center. This first ever opportunity for women of color infected and affected by HIV disease to meet and be heard by policy makers, elected officials and health care providers was called **"Breaking the Silence: Voices of HIV Positive Women of Color Living the Reality."** The Summit was part of an ongoing initiative in WCAC's effort to identify the needs of women infected, affected and at high risk for HIV infection and to develop recommendations to improve prevention, education, health and related support services for these women.

In Massachusetts, as in the United States, women of color are disproportionately affected by the HIV and AIDS epidemic. They account for more than 60% of the documented AIDS cases in adult females. This data confirms a need for HIV prevention and education programs directed to the racial, ethnic, age, and reproductive concerns of African-Americans, Latinas, Cape Verdeans, Portuguese and Native Americans living in the state.

Using survey results from focus groups and surveys conducted among women of color and care providers in Massachusetts, WCAC has conducted and continues to conduct an extensive and thorough HIV-related needs assessment. It has been found thus far that women's needs have a broad spectrum. Special issues impacting women include access to affordable and comprehensive gynecological services, transportation, and child care availability to allow women with children to access other services and maintain a primary care giver role in their families. Services must be designed with the assumption that women are extremely diverse culturally, economically and spiritually and have a wide range of sexual and gender roles and family configurations.

Recommendations made by the WCAC include participation of infected and affected women in policy and planning and training for health care and social service providers. WCAC also recommended that legislators, public health officials, and other policy makers listen closely to the needs of HIV affected women of color, that services be provided in a culturally and linguistically competent way, and that special needs of certain women (i.e. the sexually abused, teenage girls, pregnant women) be taken into consideration at all levels.

### From the AIDS Bureau Planning Unit: *For more information about these items, please call 727-0368.*

* The HIV/AIDS Bureau is convening a Statewide Community HIV Prevention Planning Group in response to the Center for Disease Control's (CDC's) Request for formalization of community input into CDC funded prevention efforts. The Planning Group will be responsible for conducting an ongoing and participatory process to set priorities for activities to prevent the spread of HIV in Massachusetts. For more information, please contact Ralph Edwards.

* A Request for Proposals (RFP) is being issued this month to solicit applications for community-based research to be funded from the Massachusetts AIDS Fund. The Massachusetts AIDS Fund is supported by contributions on the state income tax form (and for late filers, it's not too late to contribute!). The research must test promising treatments for HIV disease and its many infections and neoplasms that are otherwise unlikely to be funded for study. For more information, please contact Emery Stephens.

* The HIV/AIDS Bureau and the Boston Department of Health and Hospitals have issued a Request for Proposals for case management and other client services in Boston, Cambridge and Somerville. A portion of this RFP will seek a contractor who **does not** currently provide case management services to oversee the development of a coordinated network. For more information, please contact Bob Carr.

* An initiative has begun with the Bureau to review current efforts for provision of HIV prevention and health services in rural communities within the state. Consumer input will be a key ingredient in thinking about ways to expand these models or develop new ones. Both HIV and non-HIV service providers will share information about HIV+ client needs and those at risk. For more information, please contact Stewart Landers.

* The Bureau is preparing a needs assessment of HIV services for the years 1995-1999. The study will be the first comprehensive look at service needs undertaken in the state since publication of the MOVE AIDS report in 1990. The current study will take a special look at housing concerns and the impact of the epidemic on family systems. For more information, please contact Diane Perlmutter.

# RESOURCES

***ACT NOW is a program that provides free medical care for people who are HIV-infected and uninsured. It is funded by the Massachusetts Department of Public Health and the Massachusetts Department of Public Welfare, Medicaid Division. Below are the phone numbers for the clinics - Ask for the HIV Coordinator.***

## BOSTON AREA CLINICS

| | |
|---|---|
| Boston Evening Medical Center | 267-7171 |
| Bowdoin Street Health Center | 825-9800 |
| Cambridge Hospital | 498-1212 |
| Chelsea Health Center | 889-8561 |
| Codman Square Health Center | 825-9660 |
| Dimock Comm. Health Center | 442-6758 ext. 328 |
| Dorchester House Multi-Service | 288-3230 ext. 279 |
| East Boston Neigh. Health Center | 569-5800 ext. 380 |
| Fenway Community Health | 267-0900 ext. 246 |
| Geiger-Gibson Community Health | 288-1140 ext. 124 |
| Little House Health Center | 282-3700 |
| Martha Eliot Health Center | 522-5300 |
| Mattapan Comm. Hlth. Center | 296-0061 |
| Neponset Harbor Health Services | 282-3200 |
| Project Trust/BCH | 534-4495 |
| Roxbury Comprehensive Health | 442-7400 ext. 229 |
| Somerville Hospital | 666-4400 ext. 253 |
| South Boston Comm. Hlth Cnt. | 269-7500 |
| South End Community Health | 266-6336 |
| Upham's Corner Health Center | 825-9839 |
| Urban Medical Group | 522-5464 |
| Whittier St. Neigh. Health Center | 427-1000 ext. 71 |

## CLINICS: NORTH SHORE & NORTHEAST

| | |
|---|---|
| Greater Lawrence Family Health | 508/685-1770 |
| Lowell Community Health | 508/937-6100 |
| Lynn Community Health Center | 617/581-3900 |
| Northshore Comm. Hlth. Center | 508/532-4903 |
| NUVA, Inc. | 508/283-0000 |

## CLINICS: SOUTH SHORE, SOUTHEAST & CAPE

| | |
|---|---|
| Greater New Bedford Comm. Hlth. | 508/992-6553 |
| Manet Community Health Center | 617/471-8683 |
| Outer Cape Health Service | 508/497-9395 |
| Stanley Street Treatment & Resource Center | 508/679-5222 ext. 236 ext. 253 |

## CLINICS: CENTRAL & WESTERN MASS.

| | |
|---|---|
| Bay State Medical Center | 413/784-0000 |
| | 413/784-3270 |
| Berkshire Medical Center | 413/447-2351 |
| Family Health & Social Services | 508/756-3528 |
| Great Brook Valley | 508/852-1805 |
| Holyoke Health Center | 413/536-8761 |
| | 413/536-8711 |
| U. Mass. Medical Center | 508/856-6027 |

***If you have other HIV-related resources (<u>not</u> calendar items) to announce, please call 522-3700 ext. 484.***

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# HIV/AIDS Quarterly Review

A newsletter of the AIDS Bureau and AIDS Surveillance Program

Vol. 1, No. 2 2nd Quarter July/August, 1994

## PLANNING FOR HIV PREVENTION IN ADOLESCENTS - DATA SOURCES

The Centers for Disease Control and Prevention (CDC) and the Massachusetts Department of Public Health (MDPH) stress prevention for a variety of health problems, including HIV infection and AIDS. Efforts to prevent transmission of HIV are particularly important, since currently there is no cure for AIDS. Since many health behaviors are established early in life, prevention activities for HIV/AIDS are targeted at the adolescent population, since it is during these years that many of the behaviors associated with HIV transmission are explored or initiated.

In order to plan prevention activities for a specific population, community-wide information is needed on the number and characteristics of persons becoming newly infected with HIV every year, as well as reliable estimates of likely future trends. Additionally, the number and characteristics of persons with behaviors or other exposures that put them at various levels of risk for HIV infection are also important data. The purpose of this article is to demonstrate the use of several data sources in planning HIV-related services, using the adolescent population as an example.

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Mi Vida: An HIV+ Young Man Tells of His Life, pg. 4

"Getting Real" About HIV in Adolescents, pg. 5

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**AIDS Surveillance:** Because of the long period between HIV infection and the occurence of AIDS-defining conditions (on average about 10 years), AIDS cases do not necessarily represent the characteristics of persons with more recently acquired HIV infections. However, changes in the characteristics of HIV-infected persons are mirrored by changes in AIDS trends. Thus, an appropriate first step in developing a community profile would be to describe trends in AIDS cases, recently reported cases, and any recent changes in the characteristics of persons with AIDS. AIDS data have also been used to estimate the number of HIV-infected persons, trends in HIV incidence and to project short-term future trends in AIDS cases. However, current mathematical techniques for estimating HIV prevalence and incidence using AIDS data are imprecise and can only be applied nationally or to large areas with the highest AIDS incidence. AIDS surveillance data do not represent persons whose HIV infection is not recognized or diagnosed.

As of August 1, 1994, 9,170 AIDS cases had been reported to the Massachusetts AIDS Surveillance Program. Of these cases, 30(<1%) were in people between the ages of 13 and 19 years. The majority of these were white males who became infected as a result of receiving contaminated blood products for treatment of hemophilia. Because of the long incubation period of HIV, those who acquire HIV infection as adolescents usually do not show AIDS-related symptoms until they are in their 20s. Of the 9,170 AIDS cases reported, 1,720 (19%) were 20-29 year olds. When cases are broken down into 20-24 and 25-29 year-old age groups, each age group has a unique profile (Table 1, pg. 3). In young adults 20-24 years, there is a higher percentage of women, a higher percentage of minorities, and a higher percentage of heterosexually transmitted infections than in the older groups of persons with AIDS.

**Surrogate Markers of HIV Risk Behaviors:** A sexually transmitted disease (STD) other than HIV infection represents an immediate health problem that stems from unprotected intercourse with an infected partner. STD patterns in a community represent markers of unsafe sexual behavior that may predict the likelihood and rate of future spread of HIV infection. In addition, the presence of an STD which causes lesions may facilitate the sexual transmission of HIV. Information from STD surveillance systems can be used to describe sub-populations and geographic areas in which unsafe sexual behaviors occur in order to target HIV prevention activities.

While data indicate that overall rates of STDs have been decreasing in Massachusetts since 1990, these rates among persons age 15 to 19 years are disproportionately higher than in other age groups. As Table 2 shows, rates among black males and females in this age group are generally higher than rates among Latino males and females, which are consistently higher than corresponding rates among white males and females. The differences are usually on the order of 10-100 times greater.

**Youth Risk Behavioral Surveillance System (YRBSS):** The YRBSS consists of local school-based surveys

Table 2. 1993 STD Case Rates for 15-19 Year Olds
(per 100,000)

| | White Male | Black Male | Latino Male | White Female | Black Female | Latino Female |
|---|---|---|---|---|---|---|
| Syph | < 1 | 8 | 29 | 2 | 100 | 37 |
| Gon | 8 | 721 | 157 | 55 | 1173 | 301 |
| Chlam | 17 | 585 | 264 | 326 | 3771 | 2845 |

Syph=Syphilis, Gon=Gonorrhea, Chlam=Chlamydia

of adolescents which attempt to collect information on a wide range of health-related issues, including drug use and sexual behavior. These surveys provide general information about HIV-related knowledge and risk behaviors and are particularly useful for planning community-wide education programs.

In Massachusetts, the Youth Risk Behavior Surveys are conducted by the Department of Education/HIV Program. The 1993 YRBS was conducted in spring of 1993 in 45 randomly selected high schools across the state; 3, 054 students, from grades 9 through 12, participated in the voluntary and anonymous survey. Answers to questions related to sexual behavior revealed a number of things. Approximately half of all students have had sexual intercourse in their lifetimes (this percentage has not increased from 1990) . However, there was an increase in the percentage of students having intercourse before the age of 13. Sixty percent of sexually experienced students have had more than one sexual partner. Six percent of sexually experienced students have had sexual contact with a person of the same sex. Forty-eight percent of students who had sexual intercourse reported using a condom the last time they had sexual intercourse, while 33% did not use any contraceptive method (Figure 1).

**Other Sources of Information:** Other sources of information are available which may be used in developing a community profile to be used for HIV prevention planning. These include:

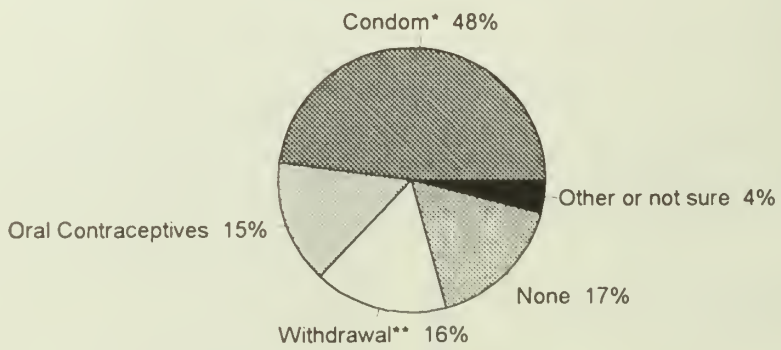
(1) HIV-Related Mortality Data: These data are useful for communicating the ultimate impact of HIV infection. They are independent of definitions used for AIDS reporting because they represent deaths attributed to HIV infection, and give a strong indication of the impact of HIV when compared with other leading causes of death.

(2) HIV Seroprevalence Surveys: These surveys measure the level of HIV infection among selected populations (childbearing women, military recruits, Job Corps applicants, blood donors, STD clinic attendees, and those in drug treatment centers). Seroprevalence rates in these surveys are representative only of the level of HIV in the subpopulation studied and may not reflect the levels in the general population.

(3) Counseling and Testing Data: Data on persons who receive HIV counseling and testing can provide information on the number of HIV tests that are conducted at these sites, the characteristics of persons who use these services, and the percentage of tests that are positive.

All of these data are in some way limited or biased, but they can provide small pieces of a broader picture of HIV infection and risk behavior in a community. Based on information from AIDS Surveillance, STD Surveillance, and the Youth Risk Behavior Survey, several things are apparent. For adolescents, prevention activities must address the needs of all by promoting abstinence and the delay of initiation of sexual activity for those who are not sexually active, and encouraging the use of disease and pregnancy prevention tools for those who are. Special attention must be given to minority adolescents, providing them with information that takes into consideration possible linguistic and cultural barriers. Condoms should be readily available to adolescents, and sexually active teens should be encouraged to use them at every sexual encounter.

Figure 1. Contraceptive Method Used At Last Sexual Intercourse Among Sexually Experienced Students




*Excludes combination with other methods **Not considered an effective method

## AIDS SURVEILLANCE SUMMARY

| | Massachusetts Diagnosed in '93 | | Massachusetts Cumulative | | United States* Cumulative | |
|---|---|---|---|---|---|---|
| Total cases reported as of 8/1/94 | 1,464 | | 9,170 | | 361,509 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 1,447 | | 9,011 | | 349,971 | |
| Male Sex w/Male | 501 | 35% | 4,193 | 47% | 193,162 | 55% |
| Injecting Drug Use | 581 | 40% | 2,827 | 31% | 86,961 | 25% |
| Male/Male Sex & IDU | 40 | 3% | 344 | 4% | 23,483 | 7% |
| Receipt of blood products | 28 | 2% | 312 | 3% | 3,134 | 1% |
| Heterosexual | 208 | 14% | 928 | 10% | 23,038 | 7% |
| Undetermined | 89 | 6% | 407 | 5% | 20,193 | 6% |
| **Transmission Mode (Pediatric)** | 17 | | 159 | | 5,234 | |
| Mother w/AIDS/at risk for HIV | 16 | 94% | 139 | 87% | 4,710 | 90% |
| Other/undetermined | | | 20 | 13% | 524 | 10% |
| **Gender** | | | | | | |
| Male | 1,140 | 78% | 7,667 | 84% | 314,627 | 87% |
| Female | 324 | 22% | 1,503 | 16% | 46,882 | 13% |
| **Mortality Status** | | | | | | |
| Alive | 1,235 | 84% | 3,913 | 43% | 140,638 | 39% |
| Dead | 229 | 16% | 5,257 | 57% | 220,871 | 61% |
| **Race/Ethnicity** | | | | | | |
| White | 779 | 53% | 5,668 | 62% | 181,358 | 50% |
| Black | 370 | 25% | 2,008 | 22% | 114,959 | 32% |
| Hispanic | 303 | 21% | 1,425 | 16% | 61,337 | 17% |
| Other/Unknown | 12 | 1% | 69 | 1% | 3,855 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 16 | 1% | 155 | 2% | 5,234 | 1% |
| 13 - 19 | | | 30 | 0% | 1,528 | 0% |
| 20 - 29 | 221 | 15% | 1,720 | 19% | 67,627 | 19% |
| 30 - 39 | 733 | 50% | 4,517 | 49% | 164,908 | 46% |
| 40 - 49 | 384 | 26% | 2,092 | 23% | 85,701 | 24% |
| Over 49 | 106 | 7% | 656 | 7% | 36,511 | 10% |

* Total U.S. Cases reported as of January 1, 1994: Figures are provisional. Heterosexual cases formerly based on Pattern II criteria are now classified as "Undetermined."

Blanks indicate less than 5 cases reported.

## TABLE 1. MASSACHUSETTS AIDS CASES IN YOUNG ADULTS

| | 20 to 24 Years | | 25 to 29 Years | | 30 Years and Older | |
|---|---|---|---|---|---|---|
| Total cases reported as of 8/1/94 | 313 | | 1,407 | | 7,265 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode** | | | | | | |
| Male Sex w/Male | 101 | 32% | 693 | 49% | 3398 | 47% |
| Injecting Drug Use | 86 | 27% | 371 | 26% | 2368 | 33% |
| Male/Male Sex & IDU | 16 | 5% | 63 | 4% | 265 | 4% |
| Receipt of blood products | 30 | 10% | 42 | 3% | 220 | 3% |
| Heterosexual | 61 | 19% | 181 | 13% | 721 | 10% |
| Undetermined | 19 | 6% | 57 | 4% | 292 | 4% |
| **Gender** | | | | | | |
| Male | 230 | 73% | 1135 | 81% | 6189 | 85% |
| Female | 83 | 27% | 272 | 19% | 1076 | 15% |
| **Race/Ethnicity** | | | | | | |
| White | 172 | 55% | 878 | 62% | 4548 | 63% |
| Black | 75 | 24% | 261 | 19% | 1606 | 22% |
| Hispanic | 65 | 21% | 255 | 18% | 1058 | 15% |
| Other/Unknown | | | 13 | 1% | 53 | 1% |



## MI VIDA: AN HIV+ YOUNG MAN TELLS OF HIS LIFE

*Protect Teen Health is a statewide peer leadership initiative that has a total of 400 youth statewide who are in or have survived "high risk" situations. Rafael Sainz is one of the peer leaders for the Boston Alliance of Gay and Lesbian Youth (BAGLY). He represents what Protect Teen Health is all about. This program is meant to reach the kids who are on the streets, exchanging in sex for drugs or money and living at or below the poverty level. Rafael received the Duane Draper Award for his outstanding work at providing HIV education to audiences statewide. Rafi, thank you for sharing your story.*

I grew up in Lawrence in the Bradford Projects. My father is an alcoholic. My mother is not an alcoholic but she is what is referred to as a "dry drunk", a person who enables the other persons' drinking. My mom is Costa Rican. My father is Cuban.

At the age of 9, I was sexually molested by the guy next door. At the age of 14, I tried to kill myself. I did not attempt suicide because I was gay or due to the stress of a society that is so homophobic. I decided on suicide because no one ever listened to me when I said that I was molested or when I explained that my father would hit me because he was drunk.

At the age of 16, I finally became comfortable with being myself, a gay Latino male. I came out to my parents and my friends. My parents found this very hard to take. Soon after I came out, my father asked me to leave the house. I was considered to be personally disrespecting my parents by coming out as gay.

At this time I moved to Boston and started living on the streets. I started getting into drugs and drinking. I started hanging around with the wrong friends. I was hungry. I had no job. I had dropped out of school. I started working the streets as a prostitute here in Boston and in New York City.

After a year and a half of living with various gay friends, I tried to get back on my feet. I got a job. I got back into school in a GED program. I was still hustling and using drugs but I tried moving back home for the summer. The alcoholism and the domestic violence was still there and I still couldn't deal with it so I decided to move out again. That summer when I turned 18, I went to a club high and drunk. My friends asked me what I wanted for my birthday and I said "sex". I chose someone and we went back to his place and smoked some pot and had unsafe sex. For about three months, we would both be high and have unsafe sex. Then he went his way and I went mine.

The summer of my 19th birthday, I was sick in Children's Hospital with hepatitis. My nurse asked me if I would like to get tested for HIV and I said yes. I didn't think there would be any problem. But while I was waiting for the results, all I could think about was the times I had unprotected sex. I got very depressed. After two weeks, I had to go back and get the test results. My friends accompanied me. When Maurice Melchiono walked in to give me my test results, I knew I was positive before he even said a word. But he did say them, "I'm sorry but your test results came back positive." He explained some things to me and my friends but I don't remember. I don't remember that whole day.

Three months after I found out I was positive, I put myself into a psychiatric hospital. While there I decided to tell my parents that I was positive. My mother cried while my father was just shocked and didn't know how to react.

After I got out, I moved back home and tried to get back into school again but some things don't change. Eventually, I decided to get a job in Boston and truly start over. My old lifestyle of hustling and using drugs resurfaced though despite my good intentions but eventually I stopped for good. I just couldn't take it anymore. Around the same time my friend Cookie was diagnosed with AIDS and I realized that nothing was really being done for youth on the topic of HIV and AIDS. I started speaking out in public forums for the AIDS Action Committee's speakers bureau and Dr. Larry Freedman.

After Cookie died, I started examining my own life and the support networks available to me. My needs were those of an adolescent i.e. going back to school, dealing with my friends, helping my parents with my HIV status. Typical support groups suited the older gay man. That's when BAGLY, Children's Hospital and I formed a support group called Positive Youth for Adolescents who are HIV+ and under the age of 24. It meets every 1st and 3rd Tuesday of the month at Children's Hospital Adolescent Clinic from 7 - 9 PM.

In 1993, I got my GED. I will be starting at Salem State College in the fall of 1994 majoring in social work and psychology. Despite my many speaking engagements, I now hold a full time position as a health educator at the Latino Health Institute. I am back home with my parents in Bradford. Everything is going really well. I feel really positive about my life right now because I have accomplished so many of my goals and much more. After all that I have been through and will go through, I think I deserve to pat myself on the back.

*For more information on Protect Teen Health, please call 727-0368.*

# "GETTING REAL" ABOUT HIV IN ADOLESCENTS

*Excerpted from an article by Karen Hein, M.D. that appeared in the American Journal of Public Health (April, 1993, Vol.83, No. 4, pp. 492-494). Dr. Hein is Director of the Adolescent AIDS Program at Montefiore Medical Center and a professor of pediatrics at Albert Einstein Medical College in New York. Reprinted with permission for the American Public Health Association.*

"Getting real" about the human immunodeficiency virus (HIV) in adolescents means acting on what is now known about the epidemic among youth. It is a time for bold steps, not timid reflection. Getting real means building upon four facts: (1) HIV is now present in Massachusetts, in the United States, and around the world. (2) Among sexually experienced people, adolescents have the highest rates of sexually transmitted diseases. Consequently, HIV is likely to become even more widespread among adolescents during the 1990s. (3) Sex education leads not to more sex but to more responsible sex. (4) Condom use will increase substantially only if actively promoted and if condoms are made easily available in schools and elsewhere.

HIV among adolescents remained an invisible epidemic until quite recently. The mean latency of 11 years from HIV infection to acquired Immunodeficiency syndrome (AIDS) kept the manifest disease hidden; most people infected as teenagers do not become ill with AIDS-defining illnesses until their 20s. During the late 1980s, Ryan White symbolized the HIV threat to young people, and his name was given to the largest US health care bill supporting HIV/AIDS services. Ryan White taught us about fear, denial, and discrimination.

Since his death at age 18, many other articulate young people who are living with HIV have stepped forward as educators, to expand the vision of adults and young people and to convey what it is like to grow up in the midst of a world pandemic.

Rapid growth of the epidemic among adolescents requires only two things: unprotected sexual intercourse and the presence of the virus. Both are common in Massacusetts and in America. Unprotected sexual intercourse is reported by roughly half of all American teenagers by the age of 19 years. In the past few years, HIV has moved well beyond coastal urban areas and has spread throughout the country. Although adolescents account for only 1% of all reported cases, a look at prevalent and new HIV cases reveals a far greater problem. In the Job Corps, the military, and selected populations of adolescents, the heterosexual spread of HIV accounts for a larger proportion of cases in adolescents 13 to 21 years than in adults. In some instances, girls have higher rates of infection than young teenage boys. Among gay men, prevention measures seem to be faltering, perhaps because young gay adolescents have not yet faced the decimation of friends and lovers experienced by older gay men.

The world pandemic of HIV has a new face: that of a young teenage woman. Many young women in the United States and around the world engage in sexual intercourse in exchange for shelter, food, clothing, money, and sometimes drugs. Their partners are often older men, a population with higher rates of HIV than younger men.

Here is a six-step plan for getting real about HIV in adolescents:

*1. Replace stereotypes about teenagers with examples of real teenagers.*

*2. Replace those messages that aim to reduce risk solely by encouraging abstinence with a more balanced approach.*

*3. Saturate the teenage world with direct, age-specific, explicit messages about risk reduction.*

*4. Link HIV prevention with HIV services.*

*5. Recognize that adults need help in dealing with sexuality and HIV at least as much as adolescents do.*

*6. Join on-site condom availability with HIV education programs in schools and youth-serving agencies.*

The federal government's Health Goals for the Year 2000 aim to almost double condom use by adolescents, from roughly 26% to 46%. Doubling condom use would require increased access to condoms, increased discussion about the appropriate use of condoms, and for adolescents who choose not to abstain from sex, adults' encouragement to practice "safer" sex by using a latex condom. These elements have not been wholeheartedly sponsored by our government. Can we do more? Surely. Will we do more? That depends upon whether or not we get real about HIV in adolescents.

# RESOURCES

## *FOR ADOLESCENTS*

**SEXUAL AWARENESS:**

| | |
|---|---|
| ABCD Health Services | 617-357-6000 ext. 250 |
| Planned Parenthood Hotline | 800-539-2378 |
| Teen Line | 617-534-5700 |

**SEXUALLY TRANSMITTED DISEASES:**

| | |
|---|---|
| Department of Public Health | 617-522-3700 ext. 409 |
| Mayor's Health Line, Boston | 617-534-5050 |

**HOMOSEXUALITY:**

| | |
|---|---|
| Boston Alliance of Gay and Lesbian Youth (BAGLY) | 800-422-2459 |
| Family Services | 617-523-6400 |
| Fenway Community Health Center | 617-267-0900 |
| Gay and Lesbian Hotline | 617-267-9001 |
| Men of Color Against AIDS | 617-536-MOCA |

**HIV/AIDS:**

| | |
|---|---|
| AIDS Action Line | 800-235-2331 |
| AIDS Action Youth Only "YO" Line | 800-788-1234 |
| American Red Cross | 617-262-1234 |
| Latino AIDS Hotline (Linea InformaSIDA) | 800-637-3776 |
| National HIV and AIDS Information Service | 800-342-AIDS |
| Positive Youth (Support group for HIV+ youth) | 617-735-6396 |
| Sidney Borum Health Center | 617-457-8140 |

**OTHER PEER SUPPORT:**

| | |
|---|---|
| Peer Listening Project | 617-267-2535 |
| Samariteens | 800-252-TEEN |

*If you have other HIV-related resources (not calendar items) to announce, please call 522-3700 ext. 484.*
*For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists at 522-3700 ext. 487.*

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# HIV/AIDS Quarterly Review

A newsletter of the AIDS Bureau and AIDS Surveillance Program

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## MASSACHUSETTS NEEDLE EXCHANGE PILOT PROGRAM UNDERWAY

One of the major modes of transmission of HIV is through infected injection equipment (needles, syringes, cookers) used by those injecting illegal drugs. The logical public health approach would be to reduce transmission through promoting the cessation of drug use. When this is not possible, other approaches include reducing the use of infected injection equipment either by making clean equipment more available through needle (syringe) exchange programs, retail sales, or other measures. There is not clear consensus on how to deal with illegal drug use, but the need to act immediately to stem the spread of HIV among injection drug users (IDUs) is clearly evident. Many HIV prevention efforts targeting IDUs emphasize cleaning syringes with bleach and water and not sharing syringes. While these measures are important and some who use injection drugs have adopted them, the lack of access to sterile syringes continues to be a major factor in the spread of HIV among IDUs.

Needle exchange programs are designed to provide sterile injection equipment to drug users. Programs operate from fixed sites (store fronts, health department facilities, community-based clinics) or conduct exchange through street outreach. Over the past two years, these programs have been extensively studied, and the studies conducted indicate that needle exchange programs do not increase drug use, do not increase the number of discarded syringes in a community, are effective in reducing the spread of HIV, and serve as a bridge to drug treatment and services for clients of needle exchange. Despite this, fewer than 50 programs (authorized or unauthorized) are in operation today.

In 1993, the Massachusetts legislature voted to allow a pilot needle exchange program to be conducted. The cities of Boston and Cambridge collaborated and ultimately hosted this innovative but controversial program of HIV/AIDS risk reduction for injection drug users.

The Massachusetts pilot needle exchange program is unusual on several counts. First, it is one of very few minority-run needle exchange programs in the United States, with an African-American woman serving as its executive director. Second, it is a collaboration between the city of Boston Department of Health and Hospitals (a city agency), Cambridge Cares About AIDS (an AIDS service organization), and ACT UP (an advocacy group which had previously operated an illegal needle exchange program in Boston). Third, this needle exchange program follows an intensive case management model, which emphasizes not just the exchange of syringes but one-on-one risk reduction and substance abuse counseling for all participants. Fourth, the program combines three different venues for exchange, a walking route (previously established by ACT UP), a mobile van, and a clinical site (the Zinberg Clinic, an HIV/AIDS clinic in Cambridge).

The program operates on a one-for-one exchange model. In addition to exchanging needles, the program provides other risk reduction tools such as bleach kits, condoms, written risk reduction materials, and alcohol swabs. As of September 1994, this program had the largest number of addicts (n = 808) enrolled of any program in the country. As part of the ongoing evaluation mechanism, a risk behavior profile is being developed which should greatly assist the way other programs of this nature successfully offer this valuable and important service to populations at great risk for HIV disease.

This program is just one of many exciting HIV prevention initiatives introduced this year with the primary focus on risk reduction. The Commonwealth observed Harm Reduction Week this summer, and organizations across the state worked extremely hard to get the message to active injection drug users that help is available in the form of not only needle exchange and bleach awareness but substance abuse treatment. The debate concerning needle exchange is not over, but will likely be a first step in a long process of exploring options for further reducing the spread of HIV among drug users.

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# RESULTS OF RECENT STUDIES OF CONDOM EFFICACY

Abstinence or mutual monogamy between two uninfected partners are the only means by which to completely eliminate the risk of sexual transmission of HIV. For those who choose to be sexually active otherwise, condoms are recommended to prevent HIV transmission. However, there continues to be misunderstanding and misinformation about condom effectiveness. This is problematic because one of the key determinants of condom use is the belief that they work. Now, based on recent studies, scientific proof of condom effectiveness exists when they are used consistently and correctly. Promoting more widespread understanding of condom efficacy in correct and consistent use is crucial.

Misinformation exists regarding condoms as adequate barrier protection. Laboratory studies show that intact latex condoms provide a continuous barrier to microorganisms as well as sperm. One myth is that HIV can pass through condoms. Condoms are classified as medical devices, regulated by the Food and Drug Administration (FDA) and manufactured according to national standards. Every condom sold in the U.S. is tested by the manufacturer electronically for defects, including holes or areas of thinning. In addition, the FDA randomly tests condoms using the water-leak test. If the FDA finds more than 4 per 1000 condoms leak, the lot is rejected for sale.

Another concern is that condoms break. Several studies clearly show that condom breakage in this country occurs at a rate of less than two percent. Most breakage is due to incorrect use rather than poor condom quality. Using oil-based lubricants will weaken latex, causing condoms to break. Condoms can also be weakened by exposure to heat or sunlight, by aging, or by tears by teeth or fingernails.

Condoms are effective barriers. How people use them is important. Several studies demonstrate that latex condoms are highly effective in preventing HIV transmission when used consistently and correctly. Two recent prospective studies present the strongest evidence to date that latex condoms are highly effective in preventing HIV transmission. These studies monitored couples in which one person was HIV-infected and the other was not. With repeated exposures to HIV, condoms proved to be highly effective for couples using them consistently and correctly.

A study by DeVincenzi and the European Study Group[1] was a prospective study of HIV negative subjects whose only risk of HIV infection was a stable heterosexual relationship with an HIV-infected partner. Two hundred fifty six couples were followed for an average of 20 months. Every six months subjects were interviewed, tested for HIV infection and counseled about safe sexual practices. Over 20 months and after 15,000 episodes of sexual intercourse, none of the uninfected partners among discordant couples who consistently and correctly used condoms for vaginal and anal sex became infected. However, among 121 couples who used condoms inconsistently, 12 of the 121 (10%) became infected.

The study of Saracco et al. [2] was also a prospective study, but of uninfected female partners of HIV-infected men. A cohort of 343 seronegative women whose only risk of acquiring HIV infection was sexual exposure to the infected partner was followed. Three of 171 (2%) women whose male partner always used condoms became infected. However, eight women of 55 (15%) in couples who used condoms inconsistently became infected, and eight of 79 (10%) women in couples who never used condoms became infected. The annual seroconversion rate was 5.7%-9.7% respectively for couples never or not always using condoms, and was reduced to 1.1% in those always using the device. No significant difference was noted between those who never and those who sometimes used condoms.

Since sample sizes were small, it is not possible to say that condoms are completely foolproof. However, it is widely recognized in public health that risk reduction, although not the same as risk elimination, is crucial (consider use of seat belts and bike helmets). Condoms do substantially reduce the risk of HIV infection during vaginal, anal and oral sex. The studies show that condom failure is not a failure of the barrier itself, but a failure of use. Since even when one partner is infected, people still do not use condoms consistently, there needs to be better understanding of both individual and societal factors related to condom use so that use and effectiveness can be maximized. Other barrier methods must be explored and evaluated, including the recently FDA-approved female condom. Other preventive methods must also be developed.

## AIDS SURVEILLANCE SUMMARY

| | Massachusetts Diagnosed in '93 | | Massachusetts Cumulative | | United States* Cumulative | |
|---|---|---|---|---|---|---|
| Total cases reported as of 10/1/94 | 1,500 | | 9,383 | | 361,164 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 1,482 | | 9,221 | | 355,936 | |
| Male Sex w/Male | 517 | 35% | 4,267 | 46% | 193,652 | 54% |
| Injecting Drug Use | 588 | 40% | 2,902 | 31% | 87,259 | 25% |
| Male/Male Sex & IDU | 47 | 3% | 360 | 4% | 23,360 | 7% |
| Receipt of blood products | 28 | 2% | 316 | 3% | 9,314 | 3% |
| Heterosexual | 213 | 14% | 945 | 10% | 23,166 | 7% |
| Undetermined | 89 | 6% | 431 | 5% | 19,185 | 5% |
| **Transmission Mode (Pediatric)** | 18 | | 162 | | 5,228 | |
| Mother w/AIDS/at risk for HIV | 17 | 94% | 141 | 87% | 4,637 | 89% |
| Other/undetermined | | | 21 | 13% | 591 | 11% |
| **Gender** | | | | | | |
| Male | 1,169 | 78% | 7,842 | 84% | 314,325 | 87% |
| Female | 331 | 22% | 1,541 | 16% | 46,838 | 13% |
| **Mortality Status** | | | | | | |
| Alive | 1,239 | 83% | 4,007 | 43% | 140,428 | 39% |
| Dead | 261 | 17% | 5,376 | 57% | 220,736 | 61% |
| **Race/Ethnicity** | | | | | | |
| White | 808 | 54% | 5,780 | 62% | 181,151 | 50% |
| Black | 375 | 25% | 2,057 | 22% | 114,868 | 32% |
| Hispanic | 306 | 20% | 1,477 | 16% | 61,297 | 17% |
| Other/Unknown | 11 | 1% | 69 | 1% | 3,848 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 17 | 1% | 158 | 2% | 5,228 | 1% |
| 13 - 19 | | | 30 | 0% | 1,554 | 0% |
| 20 - 29 | 225 | 15% | 1,752 | 19% | 68,483 | 19% |
| 30 - 39 | 753 | 50% | 4,627 | 49% | 164,487 | 46% |
| 40 - 49 | 393 | 26% | 2,142 | 23% | 85,150 | 24% |
| Over 49 | 108 | 7% | 674 | 7% | 36,260 | 10% |

* Total U.S. Cases reported as of January 1, 1994. Heterosexual cases formerly based on Pattern II criteria are now classified as "Undetermined."

Blanks indicate less than 5 cases reported.


**References Related to Condom Efficacy (cited in adjacent article):**

[1] De Vincenzi, I. (for The European Study Group on Heterosexual Transmission of HIV). A longitudinal study of human immunodeficiency virus transmission by heterosexual partners. NEJM 1994; 331(6):341.

[2] Saracco, A. et al. Man-to-woman sexual transmission of HIV: longitudinal study of 343 steady partners of infected men. J. AIDS 1993;6(5):497.

**...and some other references.**

[3] Centers for Disease Control and Prevention. Facts about condoms and their use in preventing HIV infection and other STDs. July, 1993 (call the National AIDS Hotline for further information: 1-800-342-AIDS).

[4] Centers for Disease Control and Prevention. Update: barrier protection against HIV infection and other sexually transmitted diseases. MMWR 1993; 42(30):589.

[5] Johnson, A.M. Condoms and HIV transmission. NEJM 1994; 331(6):391.

[6] Roper, W.L., Peterson, H.B., and Curran, J.W. Condoms and HIV/STD prevention - clarifying the message. Am. J. Public Health 1993;83(4):501.


## PARTNER NOTIFICATION FOR HIV-INFECTED PEOPLE

Public health practice depends on two main strategies- identifying those who have been exposed or are at high risk of exposure to disease and fashioning and implementing appropriate interventions. The Massachusetts Department of Public Health (MDPH) Division of Sexually Transmitted Disease (STD) Control has used Partner Notification as a tool to reduce numbers of syphilis and gonorrhea cases for decades. This service has been extended to HIV-infected individuals for the past five years to provide voluntary and confidential notification and referrals to individuals exposed to HIV. Partner notification promotes disease prevention through education and disease control effort targeted to individuals at risk for HIV infection who are unknowing and uninformed of their risk. An infected individual identifies sexual or needle-sharing partners, who are in turn informed of their exposure and offered services to prevent or manage the infection.

At the time that individuals discover that they are infected with an STD/HIV, they have the option (though strongly recommended, it is voluntary) of notifying their partners. If diagnosed with an infection at a state-supported STD clinic or anonymous HIV counseling/testing site, the infected person is introduced to a Disease Intervention Specialist (DIS) from the MDPH trained in STD education and counseling. The patient can then choose: (a) to notify his/her partner(s), with the DIS available to advise how to do this in a sensitive manner with the goal of encouraging the partner to seek medical attention, or (b) to give partners' names to the DIS, who can perform the service. A person diagnosed by a private physician can be referred to the DIS. Again, partner notification is strictly voluntary.

Information related to STDs or HIV infection is, by nature, very sensitive. Often concerns are voiced regarding the confidentiality of partner notification. If partner notification programs could not assure strict confidentiality of information volunteered to them by patients, the harm to individuals and to community trust in disease control programs would have already resulted in program extinction. There exists a long-standing record of health department performance in protecting patient confidentiality. All partner notification activities are carried out in private and in person. An infected person's identity is never revealed nor acknowledged in STD/HIV partner notification. All individual records are destroyed when either a partner has been notified or when a partner cannot be located.

In Massachusetts, STD records are protected against public release, unauthorized access, or subpoena by Chapter 111, Section 119 of Massachusetts General Laws. Unauthorized disclosure of HIV antibody test results (or even test performance) is prohibited by Chapter 111, Section 70F of Massachusetts General Laws.

There is a concern that partner notification to prevent HIV transmission will not work as it does for other STDs because curative treatment is not available. Education is the reason that partner notification should be a part of HIV prevention efforts. The process can help reach people with real and often continuing risk for HIV infection who are unaware of their risk or exhibit denial. It allows an infected client to participate in disease prevention and take a role in their own care and in the care of those important to them. Partners of the client are informed of risks of which they may not be aware, risks to which they may be exposing other partners. They are offered counseling, testing and prevention education. No partner is pressured into testing.

Table 1 shows the record of HIV partner notification efforts conducted by the Division of STD in the first two quarters of 1994. As can be seen, 48 contacts were named by HIV-infected clients. Of this group, 33 were located.

### Table 1. HIV Partner Notification Efforts Conducted by the MDPH STD Division

| | 1994 (Quarters 1 and 2) |
|---|---|
| Partners named | 48 |
| Partners located | 33/48 (69%) |
| Partners newly diagnosed HIV+ | 20/33 (61%) |
| Partners previously diagnosed HIV+ | 5/33 (15%) |

Of the 33 partners located, 25 were identified as being infected with HIV. Of these 25 partners, 20 were newly discovered positives and were discovered through partner notification services. Additionally, 5 partners who were located disclosed that they were positive. Eight contacts were not infected and received one-on-one risk reduction counseling. It is important to emphasize that only those clients who are highly motivated to notify their partners seek out or are referred to STD services. Thus, 20 unknowingly infected persons were identified, offered early medical care, and educated to prevent further transmission of the virus.

# HARM REDUCTION, INJECTION DRUG USERS, and HIV/AIDS

Between 750,000 and 1 million people in the United States are injection drug users (IDUs) and are faced daily with the risks involved in substance abuse and the increased risk of exposure to HIV. According to the Bureau of Substance Abuse Services, at least 50,000 individuals in Massachusetts are currently injection drug users and the increased availability, purity and low cost of heroin in the Commonwealth is creating a new, younger generation of heroin users.

The preferred public health strategy is to have the IDU enter treatment. However, when that is not possible, insuring the availability of vehicles of harm reduction (i.e. bleach awareness, needle exchange, condom distribution) against HIV may keep this population from becoming infected until they are ready to seek treatment. Aggressive community-based outreach activity has helped to bring people into treatment and increased awareness of the threat of HIV disease to injection drug users.

Over 3,100 cases of AIDS diagnosed in Massachusetts are attributable, either directly or indirectly, to injection drug use, and 16,000 individuals in the state are currently in substance abuse treatment for injection drug use. This substance abuse is not confined to low income minority populations but is an issue in every community. Injection drug use is practiced in rural communities, in physically challenged communities, and in affluent communities as well as low income communities; therefore, all are at risk for HIV infection.

Women and children have been greatly affected by the dual epidemics of HIV disease and substance abuse. Women become infected through their own substance abuse or as a result of having unprotected sex with those infected through injection drug use; 71% of AIDS cases diagnosed in women are a result, either directly or indirectly, of injection drug use. Women infected with HIV can transmit the virus to their children perinatally.

In terms of injection drug use, "harm reduction" is a concept that encourages substance abusers to reduce the harm done to themselves as well as the harm done to their families and communities by licit and illicit substance abuse. The concept of harm reduction has been around for a number of years, and it routinely fosters ideological conflicts among the many substance abuse professionals who advocate the drug-free-only approach versus safer drug usage (i.e. needle exchange, bleach awareness) until substance abuse treatment is sought out by the individual.

Primary to the concept of harm reduction is the recognition of the intrinsic dignity of all humans. By providing IDUs access to the knowledge on how to stay healthy and become healthier, the competency of their efforts to protect themselves is recognized. To effectively engage individuals, it is best to begin where the individual is and then work to create an environment that draws on and allows free expression and discussion of that individual's situation and values.

Essential to the success of any harm reduction effort is the pledge of mutual respect, the assurance of non-coercion, and the acceptance of the IDU's competence. Intervention is the goal for the outreach educator and stages of change must be acknowledged and encouraged. By employing this comprehensive and holistic approach, it may be possible to keep individuals safe from HIV and AIDS until they are ready to seek treatment.

It is this willingness to engage the injection drug user, regardless of differing values, and to face with them the harm done to and by them and offer vehicles to reduce that harm that distinguishes this principle from many others currently circulating in substance abuse treatment arenas.

Harm reduction as a concept is not solely in the province of IDU's but can and should be incorporated into prevention and education efforts when addressing other behaviors (i.e. unprotected sex, alcohol abuse, narcotic abuse) that place individuals at risk of harming their physical well being and contracting HIV.

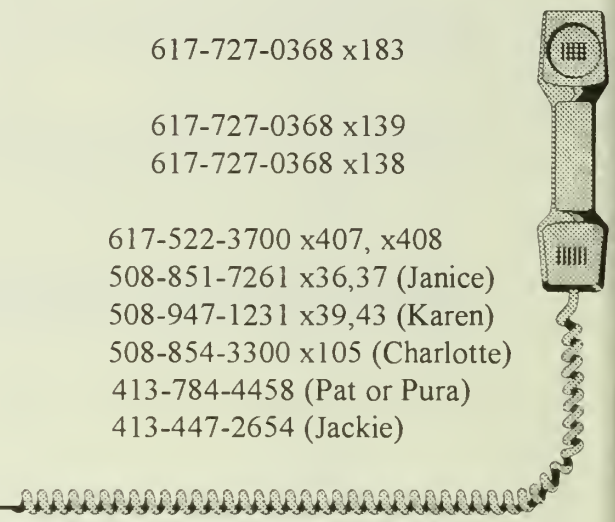
*Sources: NIDA, National Household Survey on Drug Abuse: Population Estimates, 1991, and the Massachusetts Department of Public Health. Harm Reduction principles and concepts provided by George Kenney, HIV and Addictions Resource Developer, AIDS Action Committee.*

**O76 UPDATE**

In February 1994, data from ACTG O76 demonstrated that administration of zidovudine to HIV-infected pregnant women and their neonates decreased perinatal HIV transmission by 67%. In light of the potential benefit of zidovudine, MDPH wants to assure that all providers of prenatal, obstetrical and pediatric care receive: (1) the recommendations regarding care of HIV-infected pregnant women and (2) brochures to provide information for patients. A mailing will be done in the coming months to provide these materials.

## RESOURCES

| | | |
|---|---|---|
| **Substance Abuse Harm Reduction** | AIDS Action Committee, George Kenney | 617-450-1360 |
| | AIDS Allies, Worcester | 413-747-5144 |
| | Needle Exchange Program | 800-383-2437 |
| | Project Trust | 617-534-4495 |
| **Safer Sex Education Trainings** | Safety Net Training for Women, Jacqui Anderson | 617-727-0368 x194 |
| | Mankind Training for Men of Color, Idris Bilal | 617-727-0368 x196 |
| | Protect Teen Health, Nancy Kohn | 617-727-0368 x183 |
| **Condom Distribution** | Maryette Guerra | 617-727-0368 x139 |
| | Amos Jones | 617-727-0368 x138 |
| **Partner Notification** | Central Office | 617-522-3700 x407, x408 |
| | Northeast | 508-851-7261 x36,37 (Janice) |
| | Southeast | 508-947-1231 x39,43 (Karen) |
| | Central | 508-854-3300 x105 (Charlotte) |
| | Western | 413-784-4458 (Pat or Pura) |
| | Pittsfield | 413-447-2654 (Jackie) |



*If you have other HIV-related resources (not calendar items) to report, please call 522-3700 ext. 484.*
*For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists at 522-3700 ext. 487.*

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Massachusetts
# HIV/AIDS Quarterly Review

*A newsletter of the AIDS Bureau and AIDS Surveillance Program*
*Vol. 1, No. 4 4th Quarter Winter, 1995*

## AIDS: THE GLOBAL PICTURE

There is nowhere in the world so remote as to be untouched by the HIV pandemic. For the past decade, scientists, doctors and activists from around the globe have been meeting annually to discuss research on the virus and AIDS. The 10th International Conference on AIDS in Yokohama, Japan was the first to be held in Asia and was attended by participants from 128 countries. Reports from the conference revealed that progress has been made in treating opportunistic infections, leading to prolonged life of higher quality for those infected with HIV, but prospects for highly effective treatments and vaccines are few. The location of the conference served to focus attention on the growth of the epidemic in Thailand, India, Myanmar, Cambodia, Indonesia, Malaysia, Pakistan, the Phillipines, and Vietnam.

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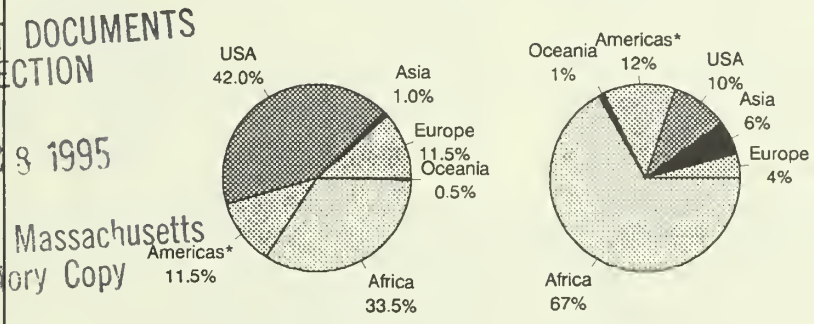
Figure 1. Total Number of AIDS Cases, Reported (1a) and Estimated (1b), Mid-1994




1a. Reported: 985,119 1b. Estimated: 4,000,000

World Health Organization
*Excluding USA

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AIDS Case Statistics and Trends, pg. 3

Nongovernmental Global Programs in Action, pg. 4

An Experience, pg. 5

Resources, pg. 6

As of mid-1994, the number of AIDS cases reported to the World Health Organization (WHO) since the start of the pandemic was 985,119. As can be seen in Figure 1(a), the majority of these cases (42%) were reported by the United States. As of mid-1994, the estimated figure was around 4 million. This represents a 60% increase from the estimated mid-1993 figure of 2.5 million AIDS cases. Figure 1(b) shows that even though the majority of cases reported to WHO are from the United States, the largest proportion of estimated AIDS cases (67%) are in Africa.

Evidence also suggests that the epidemic is taking hold in South and Southeast Asia. The estimated number of AIDS cases in this region increased 8-fold in the past year from 30,000 cases to 250,000. Consequently, cases from this area made up 6% of this year's estimated AIDS cases, as compare to 1% of last year's cases.

As large as these numbers may be, estimated AIDS cases only represent the visible "tip of the iceburg" of those who are HIV-infected. On average, there is a period of ten years between initial HIV infection and onset of AIDS; the AIDS cases today give a picture of HIV infection a decade ago. Since the beginning of the pandemic, it is estimated that 16 million adults have been infected, with 3 million added since mid-1993; half of these infections occurred in women. Additionally, 1 million children have been infected. Figure 2 shows a global distribution of those who are HIV-infected. WHO predicts that by the end of the century, the global total of HIV-infected individuals will be 30 to 40 million. It

is predicted that the expansion of the epidemic will be most dramatic in Asia. Today's cumulative 2.5 million infections (40% in women) is expected to increase four-fold to over 10 million infections by the year 2000.

There are difficulties in making projections of the number of persons infected with HIV. Infection is largely undetected, and AIDS cases are seriously underreported in some countries because of inadequate diagnostic capacity and poor disease surveillance. Consequently, the global magnitude of HIV infection must be estimated based on HIV prevalence and incidence in specific population groups and areas, the estimated size of these groups, the prevalence in neighboring areas, and trends over time. These methods have been used to estimate the number of HIV infections in South and Southeast Asia.

In Asia, heterosexual transmission predominates as it does worldwide, with significant levels of infection in female sex workers in several states in India, various cities of Myanmar, and across Thailand. Commercial sex workers in Cambodia and fishermen working off the Indonesian archipelago have been found to be infected. In many states in India, prevalence levels in patients with sexually transmitted diseases are estimated to be about 1%.

In Thailand, HIV infection is spreading in the general population. In 1992, over 3.5% of military recruits aged 21 years were infected, with a prevalence rate close to 20% in Chiang Rai, northern Thailand. About eight percent of women attending antenatal clinics in this region were infected.

HIV infection prevalence rates among injection drug users in Ho Chi Minh City, Vietnam; peninsular Malaysia; and Yunnan province, China have increased dramatically, going from 2% in 1992 to 30% in the third quarter of 1993. Between the late 1980s and 1992, prevalence rates in injection drug users in Bangkok, Thailand; Manipur, northeast India; and Yangon, Myanmar increased to 50%.

The 10th International AIDS Conference in Asia focused attention on the expanding epidemic in this region. There are no areas of the world unaffected. An initial global AIDS strategy was drafted by the World Health Organization at the 1st International AIDS Conference in April, 1985. This strategy consisted of (1) providing education about the disease to those without information; (2) targeting health services at high risk groups; and (3) discouraging discrimination against those with disease. Those involved in the fight against the spread of HIV infection continue to struggle to achieve these goals. Dr. Jonathan Mann, of the Harvard School of Public Health who served as the first director of the World Health Organization's AIDS Program, said, "The conditions of the modern world are uniquely favorable to rapid global spread of infectious diseases." Dr. Mann emphasized at the conference in Yokohama that social problems - sexual inequality, cultural barriers to open discussion of sexuality, and economic inequity - continue to impede the progress against this virus in every country in the world.

## Figure 2. Estimated Global Distribution of Cumulative HIV Infection by Continent or Region, Mid-1994

World Health Organization

**"If we all do our utmost within our families of choice - whether they are people who share our home or those who share our planet - we shall help immeasurably to defeat AIDS in every family."**
**Dr. Michael H. Merson, Executive Director of WHO's Global Programme on AIDS**

# AIDS SURVEILLANCE SUMMARY

| | Massachusetts Diagnosed in '93 | | Massachusetts Cumulative | | United States* Cumulative | |
|---|---|---|---|---|---|---|
| Total cases reported as of 1/1/95 | 1,545 | | 9,736 | | 401,749 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 1,527 | | 9,569 | | 396,015 | |
| Male Sex w/Male | 540 | 35% | 4,398 | 46% | 211,779 | 53% |
| Injecting Drug Use | 596 | 39% | 3,014 | 31% | 98,367 | 25% |
| Male/Male Sex & IDU | 52 | 3% | 380 | 4% | 25,447 | 6% |
| Receipt of blood products | 31 | 2% | 324 | 3% | 9,952 | 3% |
| Heterosexual | 195 | 13% | 995 | 10% | 27,281 | 7% |
| Undetermined | 113 | 7% | 458 | 5% | 23,189 | 6% |
| **Transmission Mode (Pediatric)** | 18 | | 167 | | 5,734 | |
| Mother w/AIDS/at risk for HIV | 17 | 94% | 146 | 87% | 5,095 | 89% |
| Other/undetermined | | | 20 | 12% | 639 | 11% |
| **Gender** | | | | | | |
| Male | 1,202 | 78% | 8,106 | 83% | 347,767 | 87% |
| Female | 343 | 22% | 1,630 | 17% | 53,978 | 13% |
| **Mortallty Status** | | | | | | |
| Alive | 1,225 | 79% | 4,057 | 42% | 158,326 | 39% |
| Dead | 320 | 21% | 5,679 | 58% | 243,423 | 61% |
| **Race/Ethnicity** | | | | | | |
| White | 832 | 54% | 5,983 | 61% | 198,130 | 49% |
| Black | 392 | 25% | 2,148 | 22% | 130,384 | 32% |
| Hispanic | 308 | 20% | 1,533 | 16% | 68,903 | 17% |
| Other/Unknown | 13 | 1% | 72 | 1% | 4,332 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 17 | 1% | 161 | 2% | 5,734 | 1% |
| 13 - 19 | 5 | 0% | 32 | 0% | 1,768 | 0% |
| 20 - 29 | 228 | 15% | 1,802 | 19% | 75,245 | 19% |
| 30 - 39 | 774 | 50% | 4,791 | 49% | 182,793 | 45% |
| 40 - 49 | 407 | 26% | 2,236 | 23% | 95,842 | 24% |
| Over 49 | 114 | 7% | 714 | 7% | 40,361 | 10% |

* Total U.S. Cases reported as of January 1, 1994. Heterosexual cases formerly based on Pattern II criteria are now classified as "Undetermined."

Blanks indicate less than 5 cases reported.

## TRENDS IN THE EPIDEMIOLOGY OF AIDS IN MA - AS OF JANUARY 1, 1995

* Injection drug-related AIDS cases continue to increase at a rapid pace. Injection drug-related cases increased from 16% of cases diagnosed in 1985 to 47% of cases diagnosed in 1994.

* Heterosexually-acquired AIDS cases represent an increasingly large proportion of AIDS cases. Ten percent of cases diagnosed in 1985 were due to heterosexual transmission, while 14% of cases diagnosed in 1994 were heterosexual cases.

* AIDS cases among women continue to increase. Cases among women rose from 9% of cases diagnosed in 1985 to 24% of cases diagnosed in 1994.

* AIDS disproportionately affects communities of color. Cumulatively, 34% of adult male cases, 57% of adult female cases, and 70% of pediatric cases are in people from communities of color.

* The AIDS epidemic continues to move beyond Boston. The percentage of cases reported among residents outside greater Boston has risen from 33% in 1985 to 48% in 1994.

## NONGOVERNMENTAL GLOBAL PROGRAMS IN ACTION

Nongovernmental organizations (NGOs) and the programs they sponsor have taken up a lot of slack where traditional government and civic organizations have fallen short in combatting AIDS. What is wonderful is that these organizations and programs have not been limited to the United States or to developed nations. This is a global trend of interested and committed individuals, health, and religious-based organizations joining the front line to find better ways of reaching people infected and affected by the disease and attempting to respond to the large demands of the pandemic.

The diversity of these nongovernmental organizations has been helpful in creating a response to AIDS. They are creating growing networks that will be crucial "in increasing small scale responses to HIV and stimulating necessary large-scale social and political changes in the fight against AIDS."

Often we miss the global picture because we are so focused on our immediate environments. However, nongovernmental organizations throughout the world have designed some creative and innovative ways of educating people and preventing the spread of HIV.

### NGO Projects and Activities Around the World (American Association of World Health)

In **Rio Grande do Sul, Brazil**, an educational comic book integrates HIV/AIDS in the story of a man in prison. Six prisoners participated in creating the story line. The comic book deals with issues such as injection drug use and unsafe sex. A condom is included with a copy of each book. The project, which is intended to be made into a video version, will be adopted in other states for showing in prisons.

In Egypt it is local businessmen who mainly fund the **Egyptian AIDS Society**. Members of the society have talked about AIDS on television and hosted information days at universities, high schools and family planning centers. The organization sponsors information workshops for medical professionals, social workers, and police officers. The society also offers counseling, social and financial support to people living with HIV/AIDS and their families.

The **Mozambique Red Cross Society (MRC)** has trained 1200 volunteers from villages. These volunteer educators give talks on safer sex, STDs, and AIDS. It is estimated that they have reached 800,000 people. Consequently, AIDS information, condom distribution and condom use are more accepted.

In the **Philippines, the Reach Out AIDS Education Foundation**, a group of theater and film artists, has staged an educational workshop called "FIRST AIDS - The Musical." It is primarily directed towards high school and university students. It is a 90-minute production that features sex workers, a gay man and a young girl with AIDS, a heterosexual couple struggling with HIV, and two teenage lovers negotiating safer sex.

All national television networks in **France** simultaneously broadcasted a three hour program on AIDS during prime time hours on April 7, 1994. The program was intended to improve knowledge of HIV infection and to raise funds for AIDS research. The program generated over $17 million in pledges and a reportedly two out of three French citizens tuned in. The prime minister of France pledged the government would match private donations.

A group of Russians and Americans working on AIDS prevention in Moscow founded **Russian AIDS Relief (RAR).** It offers support to HIV infected Russians. The program provides crisis welfare support to people living with HIV/AIDS, and also develops and relays to the media and the community a positive and informed image of people infected and affected with HIV/AIDS. RAR collects and distributes clothing, food, and medication, and it provides support groups and information to individuals, their families, and caretakers.

Eleven years ago the **Indian Health Organization (IHO)** was founded. It has "begun promoting the *Kama Sutra*, an ancient Sanskrit treatise on the art of physical love, as a manual of safer sex." On both postcards and T-shirts, the message being conveyed is that safer sex is many positions with one partner as opposed to one position with many partners. This campaign has helped break taboos and promote safer sex and alternatives to condom use while helping people discuss human sexuality and increase open discussion about STDs, including HIV/AIDS.

In **Malaysia, the National AIDS Programme** published a pocket calendar encouraging people to "wise - up" with the ABC's of safe sexual behavior; for example, Abstinence, Be Faithful, Condoms- use them properly.

The **Nepal AIDS Prevention and Control Project** supported the Sarbanum Theater Group in staging a street play called "Gangaram" to educate and inform people about AIDS. As street drama has become an important part of AIDS education in Nepal, more than 50,000 people have seen this show.

In **Cuidad, Mexico, The Mexican Federation of Private Family Planning Associations (FEMAP)** is a non-profit organization that has initiated a community-based intervention program. The organization provides health education and community development skills to peer educators who provide commercial sex workers with condoms, spermicide, and infomation about AIDS/STD prevention.

The **African Medical Research Association (AMREF)**, through the cooperative efforts of the Tanzanian

Ministry of Health, two major transport companies, and the residents of truck stops along the highway, has created a valuable service delivery system. This extremely varied collaborative has implemented an education and condom distribution program. The program was designed for intervention along the Tunduma Highway, which runs from Dar es-Salaam through Tanzania to Zambia and Zaire. This territory was crucial because of the allegations that transmission of HIV could occur by truck drivers who would spend long periods of time away from home and often have sexual encounters along the way. The program developed educational materials and disseminated them at project sites. At seminars and in group discussions, project leaders offered information and demonstrated the correct use of condoms.

In **Thailand**, heterosexual contact is the predominant mode of transmission of HIV infection. An estimated 100,000 female sex workers and their male customers are the most vulnerable. Pilot projects enforcing "100% condom use" have proved successful and developed into policy in 66 of Thailand's 73 provinces.

"Stop AIDS" is a mass media campaign in **Switzerland** that uses all available media including T.V., cinema, posters, bill-boards, daily press, sex and youth publications and commercial advertisements. It addresses the general population with well-targeted messages about HIV and AIDS. The project is very effective, condom sales have doubled in five years and there is no evidence of an increase in the number of casual sex partnerships among youth since the program was initiated.

The Massachusetts Department of Public Health has taken a leadership position in the United States in the struggle to defeat HIV/AIDS. The answer to the HIV/AIDS pandemic will be found through the collaborative efforts of all people on the planet working together to prevent more infections and find effective treatments for people already affected by HIV/AIDS.

*Sources: World AIDS Day 1994 and 1995, Massachusetts Medical Society.*

## An experience

Persistent fevers, aggressive herpes simplex, weight loss;
Persistent diarrhoea, aggressive herpes zoster, appetite loss;
Persistent cough, generalised pruritic dermatitis, hair loss;
Persistent headache, generalised candidiasis, skin texture loss;
Persistent body weakness, generalised lymphadenopathy, memory loss;

Unemployment, lost self-esteem, lost relationships; lost opportunities.
Name them. Ask me the feel of one, two, three, four or all of them:
Singularly or grossly combined.

The famous syndrome tortured me mercilessly
Crowded general hospital wards discharged me ruthlessly.
What next then? Back to the village to die of course.

But...

East, West, North or South;
Left, Right or Centre;
Home is best.

Readily welcoming me back, a ghost, a skeleton, a shadow.
But just how far can this "welcome" stretch?
I hated the goddam place, especially in my health status!
A mere ugly, wrinkled, pale image that I was.

Free entertainment to relatives, friends, in-laws;
Hurriedly flocking in to visit the patient I was,
More to see a case of 'slim' live than sympathise or empathise.

I, all my kinsmen, swallowed this painfully.
Till minutes, hours, days, months, years have rolled by
With stretched necks, whispered words of "maybe it was not".

I DID NOT AND HAVE NOT DIED,
What sweet relief it is to share this fatal dilemma!
A problem share is a problem halved.

Going public with AIDS,
Leaves little or no more to hide.
Varied reactions arise of course;
Rejection, sympathy, stigmatisation, empathy;
Finally acceptance, and perhaps genuine respect with time.

*From "The Newsletter of the World Health Organization Global Programme on AIDS". The author, Elizabeth Adikini Ofwono, of Kampala, Uganda, is a counsellor for the Philly Lutaaya Initiative, an offshoot of the AIDS Support Organisation (TASO) named after a Ugandan singer who died of AIDS.*

## RESOURCES

### SUPPORT GROUPS FOR PEOPLE WITH HIV/AIDS IN THE BOSTON AREA

There are many support groups available for those with HIV/AIDS and their friends/families. These include groups for women, recovering addicts, the bereaved, providers, groups using different languages, and peer-led groups. Positive Directions in Boston maintains a clearinghouse for referrals to support groups across the state and can be a resource for information about groups in your area. For information, call (800) 794-7337. If you need further assistance, contact the HIV/AIDS Bureau at (617)727-0368. Below is a list of phone numbers for Boston area support groups for people with HIV/AIDS.

| | |
|---|---|
| **AIDS Action Committee** | **(617) 437-6200 x 1274** |
| **Boston Evening Medical Center** | **(617) 262-9379** |
| **Cambridge Cares About AIDS** | **(617) 661-3040** |
| **Deaconess Hospital** | **(617) 632-7706** |
| **Dimock Community Health Center** | **(617) 442-8800 x324** |
| **Fenway Community Health Center** | **(617) 267-0900 x287** |
| **Neponset Health Center** | **(617) 282-3200** |
| **Positive Directions** | **(617) 262-3456** |

*If you have other HIV-related resources (not calendar items) to report, please call 522-3700 ext. 478.*
*For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists at 522-3700 ext. 487.*

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Massachusetts

# HIV/AIDS Quarterly Review

*A newsletter of the AIDS Bureau and AIDS Surveillance Program*
*Vol. 2, No. 2 3rd Quarter October, 1995*

## PROJECTIONS OF HIV INFECTION AND AIDS IN MASSACHUSETTS
### Can We Predict the Future?

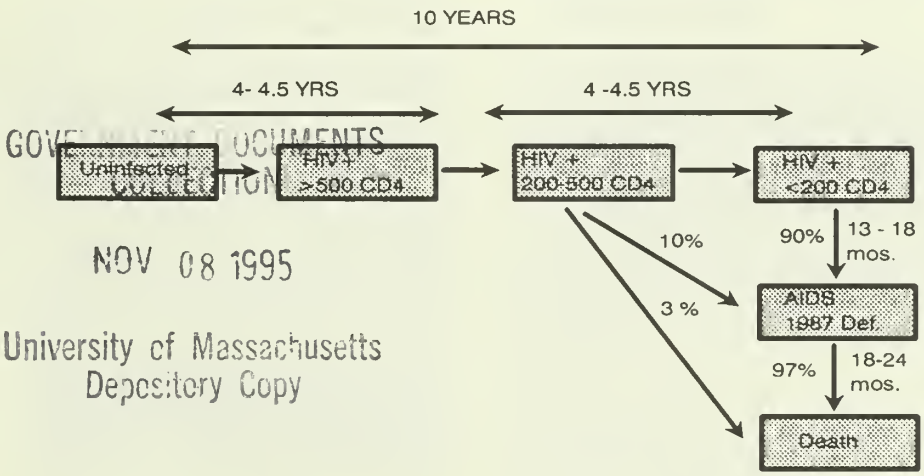
Planning HIV/AIDS services requires estimates of future trends, conditions and needs. Projection of future AIDS cases and HIV infection is difficult. Despite this difficulty, forecast of the direction of the AIDS epidemic in Massachusetts is necessary in order to plan for prevention programs, social services, economic assistance and medical care.

In 1994, the Massachusetts AIDS Surveillance Program developed projections of HIV/AIDS in Massachusetts through 1996. These projections were extended through 1999 for the purposes of a five year needs assessment developed by the John Snow Research and Training Institute under contract with the HIV/AIDS Bureau of the Massachusetts Department of Public Health (MDPH).

AIDS projections methods include making assumptions about large population groups from what is known about infection rates in smaller groups; using AIDS surveillance data and other observations to predict future cases; estimating future trends from current and past trends; and "back-calculation" using AIDS case reports over time to estimate the number of people with HIV infection and expected AIDS cases in the future.

A variety of projection methods were used in 1990 in support of the report *Developing AIDS/HIV Services in Massachusetts: A Blueprint for Action 1990-1994* (MOVE AIDS Project, MDPH, 1990). Extrapolation (extending trends into the future) and back-calculation have been used more frequently on the national level because large numbers of cases make these methods reliable.

Figure 1. MODEL FOR PROGRESSION OF HIV INFECTION (for Projections)

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Different projection methods have different drawbacks. Methods relying on small populations or expected developments depend on the assumptions used. For example, sample populations may or may not be representative of the population in general. Assumptions about completeness of case-reporting , disease progression, response to treatment, survival, and other factors affect any technique. Procedures depending on past trends assume that the future will be similar to the past. Back-calculation techniques have been considered the best, but these methods depend on accurate estimation of the time between HIV infection and AIDS and how cases are reported.

The most difficult problem in HIV/AIDS projections is the change in the official AIDS surveillance case definition that became effective in January 1993. The new case definition added three new AIDS-defining conditions, but more importantly, defined HIV infection with a CD4+ T-lymphocyte count of less than 200 cells per $mm^3$ (or percent CD4+ cells of <14%) as AIDS. While this addressed the importance of severe immune compromise in HIV infection, it also made comparison with previous case reporting difficult, if not impossible.

AIDS-defining conditions are distinct clinical events. While medical care affects the occurrence of AIDS-defining

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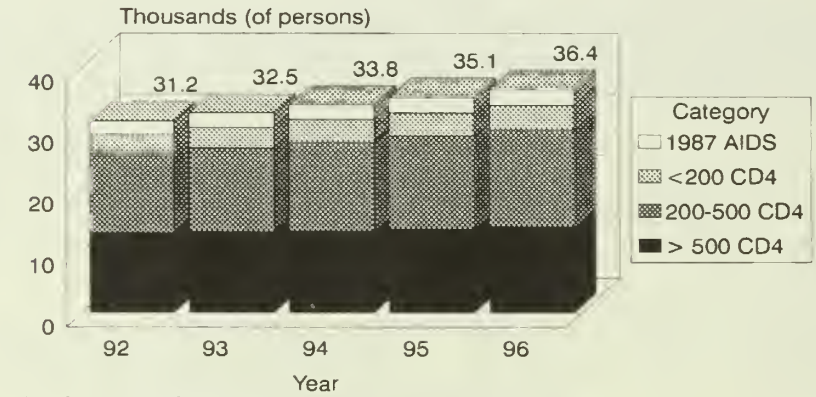
conditions, when they do occur they are generally clear-cut. A patient who goes to a hospital or other health care facility with *Pneumocystis carinii* pneumonia, infection with atypical mycobacteria, or many of the other common AIDS-defining conditions, meets the AIDS case definition whether or not they already know they have HIV infection. Since immunosuppression represented by a low CD4+ T-lymphocyte count is not a clinical event and may occur without any associated signs or symptoms, an AIDS case by laboratory test requires knowledge of HIV infection, a CD4+ cell count to be done, recognition that the count meets the case definition, and report of the case by the health care provider. The first CD4+ cell count may be substantially less than 200 per $mm^3$ so date of meeting the case definition cannot be estimated in these cases. The new case definition thus complicates any projection method that depends on trends in case reporting. To a greater or lesser degree, all the methods do depend on consistent case-reporting over time.

The methods used for the 1990 needs assessment, while quite successful in predicting AIDS cases through 1994, are no longer valid because the underlying assumptions no longer hold. For new projections, national projections provided by the Centers for Disease Control and Prevention (CDC) are applied to Massachusetts.

Figure 2. Prevalence* of HIV-infected Persons in Massachusetts Projected for 1992-1996



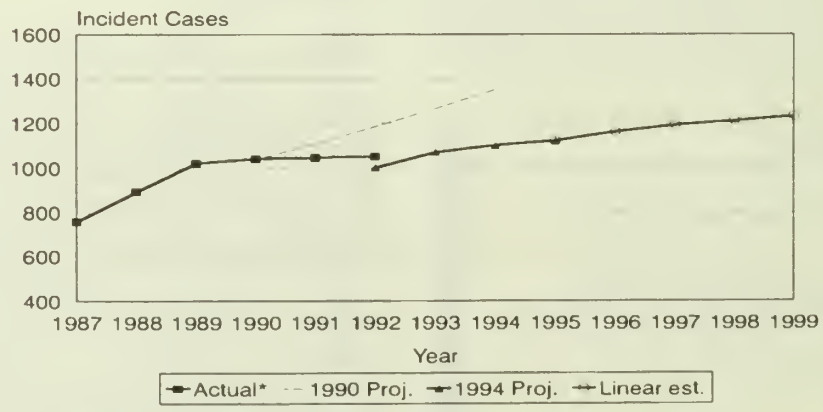

* As of June 30 of each year

AIDS cases reported in Massachusetts and the U.S. under the case definition in effect 1987 through 1992 were compared over time. Trends were parallel as they have been virtually throughout the epidemic. Massachusetts accounts for 2.4% of the U.S. population and has consistently contributed 2.2% of the AIDS cases to the U.S. total. Although this "averageness" of the epidemic in Massachusetts will probably not continue indefinitely, it is probably safe to assume that drastic change will not happen in the short term. Therefore, predicted national trends (obtained by back-calculation methods by CDC[1] and Brookmeyer[2]) were applied to Massachusetts. This approach only works for cases meeting the 1987 case definition. Projections for HIV infection not meeting this case definition were estimated on the basis of other studies.

Baseline estimates of prevalence of 1987 case definition AIDS in Massachusetts were calculated using AIDS Surveillance Program data on reported cases and known survival. Numbers were adjusted for 15% underreporting, as per CDC. Baseline numbers of people with CD4+ T-lymphocyte count < 200 per $mm^3$ were estimated by multiplying the number of AIDS cases by 1.5, based on published reports. Baseline estimates for numbers of persons with HIV infection and CD4+ cell counts of 200-500 and >500 per $mm^3$ were obtained by applying information from published studies of HIV-infected populations. Projections for 1993 through 1996 were then calculated using the national projections for each year and a model for the progression of HIV infection (see Figure 1 ), presumed new infections (based on national estimates) and expected mortality. Actual projections are presented on Figure 2.

Observed reported AIDS cases by year, projections from the 1990 report and the current projections (all 1987 case definition) are presented in Figure 3. In order to predict needs up to 1999, projections through 1996 had to be carried further. The reliability of more long term projections decreases considerably. However, it was decided that for planning purposes, projections

Figure 3. Observed AIDS Cases, Past Projections, and Current Projections by Year (1987 Case Definition)




*Adjusted for 15% underdiagnosis/underreporting.

## AIDS SURVEILLANCE SUMMARY

| | Massachusetts Diagnosed in '94* | | Massachusetts Cumulative | | United States** Cumulative | |
|---|---|---|---|---|---|---|
| Total cases reported as of 10/1/95 | 1,112 | | 10,725 | | 441,528 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 1,099 | | 10,546 | | 435,319 | |
| Male Sex w/Male | 363 | 33% | 4,766 | 45% | 228,954 | 53% |
| Injecting Drug Use | 412 | 37% | 3,346 | 32% | 109,393 | 25% |
| Male/Male Sex & IDU | 33 | 3% | 410 | 4% | 28,521 | 7% |
| Receipt of blood products | 11 | 1% | 351 | 3% | 10,508 | 2% |
| Heterosexual | 160 | 15% | 1,114 | 11% | 31,663 | 7% |
| Undetermined | 120 | 11% | 559 | 5% | 26,280 | 6% |
| **Transmission Mode (Pediatric)** | 13 | | 179 | | 6,209 | |
| Mother w/AIDS/HIV | 13 | 100% | 158 | 88% | 5,541 | 89% |
| Other/undetermined | | | 21 | 12% | 668 | 11% |
| **Gender** | | | | | | |
| Male | 866 | 78% | 8,892 | 83% | 380,126 | 86% |
| Female | 246 | 22% | 1,833 | 17% | 61,400 | 14% |
| **Mortality Status** | | | | | | |
| Alive | 926 | 83% | 4,121 | 38% | 170,658 | 39% |
| Dead | 186 | 17% | 6,604 | 62% | 270,870 | 61% |
| **Race/Ethnicity** | | | | | | |
| White | 572 | 51% | 6,566 | 61% | 214,146 | 49% |
| Black | 271 | 24% | 2,347 | 22% | 146,285 | 33% |
| Hispanic | 260 | 23% | 1,733 | 16% | 76,323 | 17% |
| Other/Unknown | 9 | 1% | 79 | 1% | 4,774 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | <14 | | 173 | 2% | 6,209 | 1% |
| 13 - 19 | <5 | | 34 | 0% | 1,965 | 0% |
| 20 - 29 | 160 | 14% | 1,931 | 18% | 81,646 | 18% |
| 30 - 39 | 538 | 48% | 5,285 | 49% | 200,970 | 46% |
| 40 - 49 | 303 | 27% | 2,506 | 23% | 106,237 | 24% |
| Over 49 | 97 | 9% | 796 | 7% | 44,499 | 10% |

* Case reporting not complete for 1994.

** Total U.S. Cases reported as of January 1, 1995. Heterosexual cases formerly based on Pattern II criteria are now classified as "Undetermined."

Blanks indicate less than 5 cases reported.

### FOOTNOTES - Projections of HIV Infection and AIDS in Massachusetts


1 CDC. Projections of the number of persons diagnosed with AIDS and the number of immunosuppressed HIV-infected persons - United States, 1992-1994. MMWR 1992; 41(RR-18): 1-29.
Karon JM, Buehler JW, Byers RH, et al. Projections of the numbers of persons diagnosed with AIDS and of immunosuppressed HIV-infected persons, United States, 1992-1994: statistical methods and parameter estimates. U.S. DHHS pub. HIV/NCID/10-92/028, Washington, DC, 1992.

2 Brookmeyer R. Reconstruction and future trends of the AIDS epidemic in the United States. Science 1991; 253: 37-42.


## PROJECTIONS OF HIV INFECTION AND AIDS IN MASSACHUSETTS (Cont.)

through 1999 would be based on an assumption of straight-line trends. The trend lines for 1997-1999 are represented in Figure 3.

Projections of AIDS and severe immunocompromise in Massachusetts were made by gender, race/ethnicity and risk behavior category. It was assumed that trends observed over the period 1989 through 1992 would continue over the next four years. Techniques used by the CDC in national projections were employed. Projections of AIDS by gender, race/ethnicity and risk behavior are presented in Figures 4, 5 and 6.

Pediatric (< 13 years old) HIV/AIDS projections are even more problematic than adult/adolescent cases, especially because of the use of prenatal and perinatal antiretroviral therapy to prevent vertical transmission. Projections have been done using data from newborn HIV antibody screening, the Massachusetts Pediatric Spectrum of (HIV) Disease Project (which is a surveillance system for HIV-exposed and HIV-infected children in medical care) and published reports on survival of children with HIV infection. However, the potential impact of perinatal zidovudine therapy is cause for revision of estimates. Pediatric prevalence projections are presented in detail in the needs assessment report.

The future can be predicted from experience, but the only test for projections is the future. Limitations on predicting the future must be appreciated whenever projections are examined. Projections of HIV/AIDS in Massachusetts are an attempt to provide some guidance for planning using the most valid methods. Projections must be work-in- progress and expectations must be adjusted to the observed.

Figure 4. Prevalence of AIDS (1987 definiton) and Severe Immunosuppression (CD4 <200) Projected 1993-1996

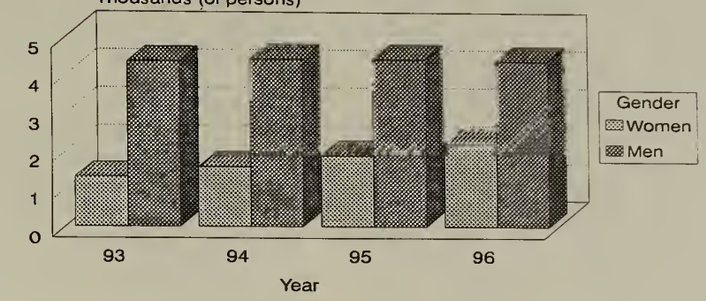



Figure 5. Prevalence of AIDS (1987 definiton) and Severe Immunosuppression (CD4 <200) Projected 1993-1996

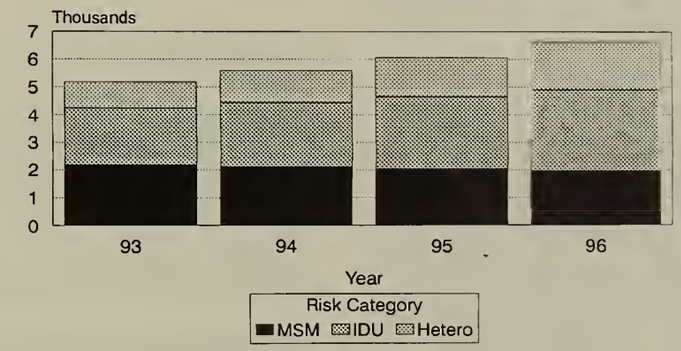
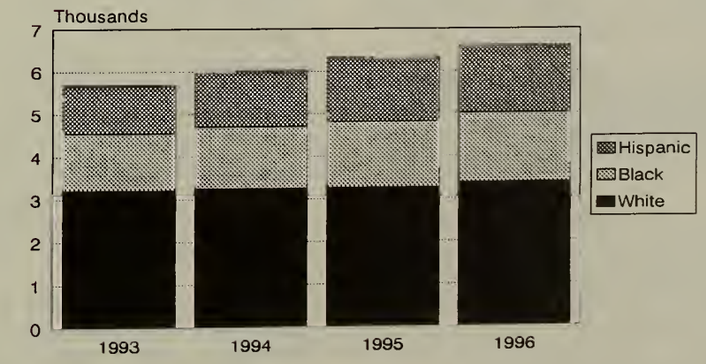



Figure 6. Prevalence of AIDS (1987 Definition) and Severe Immunosuppression (CD4<200) by Race and Ethnic Group, Projected 1993-1996



# KEY FINDINGS OF THE NEEDLE EXCHANGE PROGRAM EVALUATION

In March 1993 an amendment to the state drug paraphernalia law allowed participants in a pilot needle exchange program to be exempt from prosecution for possessing syringes. Thus AHOPE (**A**ddicts **H**ope **O**pportunity **E**xchange) was formed in the cities of Boston and Cambridge under the direction of Rhoda Creamer at the Boston Department of Health and Hospitals, with partnership agreements with Cambridge Cares About AIDS (an AIDS service organization) and ACT-UP (an advocacy group). Working collaboratively with local police, sites were established in several Boston neighborhoods, utilizing a van as well as walking routes. In Cambridge, the program established sites in front of a homeless shelter, a church, and an HIV clinic.

Key to this pilot endeavor is the linkage to drug treatment for those desiring it, through allocation of funds by the DPH's Bureau of Substance Abuse Services. Outreach workers are experienced case managers, able to link clients to drug treatment, counseling and testing, TB prevention, and primary medical care. Bleach, alcohol swabs, condoms, and other prevention materials are available to all participants.

A rigorous process and outcome evaluation accompanied the first program year. Below are summarized some of the key findings related to community impact and benefit to enrollees.

***Question 1. Who enrolled in the program?***

A total of 1,315 clients enrolled the first year; 25% female, 75% male. Their race/ethnicity was 54% white, 33% African-American, 9% Latino/a, and 4% other.

The mean age of enrollees was 38 years with a 17-year history of injecting drugs. Forty-five percent of enrollees reported themselves as homeless on the day of enrollment.

**Conclusion:** The program attracted older, poorer, long-standing drug injectors whose drug of choice was heroin. There was no evidence that encouraged younger, first-time users. The majority of clients were white, with African-Americans and Latinos/as following as the group most served.

***Question 2. What drug behaviors put these clients at risk?***

Ninety-six percent of enrollees injected on average three times per day. While 62% reported never sharing syringes, the remaining shared with at least one other person. People who reported using a combination of heroin and cocaine were 2.5 more likely to report sharing syringes. People who went to shooting galleries were nearly three times more likely to report sharing.

***Question 3. What sexual behaviors put enrollees at risk?***

Sixty-six percent reported being sexually active in the last 30 days. Multiple partners and inconsistent condom use was common; 48% of female clients used condoms "most of the time" with their male partners, and 46% of male clients reported this same level of condom use with their female partners. Sixty-two percent of male clients used condoms "most of the time" with their male partners.

**Conclusions:** Clients were at high risk for HIV transmission both through needle sharing and unprotected sexual activity. Enrollment in the program offers an ongoing, consistent way for clients to receive prevention messages and prevention supplies such as condoms, bleach, and alcohol swabs.

***Question 4. Did needle exchange facilitate drug treatment for injection drug users?***

Over 16% of eligible clients accessed drug treatment services. Of these, 40% received detox services, 38% methadone maintenance, and 20% residential treatment.

**Conclusion:** AHOPE facilitated enrollment into drug treatment for a significant number of out-of-treatment injectors.

***Question 5. Did AHOPE produce an increase in crime or needle stick injuries to public service workers such as police in the areas were they were located?***

Crime rates overall have declined in Boston and Cambridge. The establishment of AHOPE appears to have had little effect on crime rates. Needle stick injuries to public service workers have been declining over the last 4 years. There is no evidence that AHOPE increased the risk to public service workers.

This evaluation was instrumental in convincing the legislature to grant permission to establish ten additional pilot sites, pending local government approval. Currently, active community groups are trying to gain local approval and establish programs that will benefit the largest segment of newly HIV-infected individuals in Massachusetts.

# RESOURCES

***For more information on:***

**Projections of HIV Infection and AIDS in Massachusetts**

The full technical report of the projections presented in this issue is available as: *Projections of HIV Infection and AIDS, Massachusetts, 1993-1996.* This report may be obtained from the AIDS Surveillance Program, Massachusetts Department of Public Health, 305 South Street, Jamaica Plain, MA 02130, Tel: (617) 983-6560, FAX: (617) 983-6580.

Further information about HIV/AIDS projections will be available soon in the publication of the five year HIV/AIDS needs assessment by JSI Research and Training Institute in collaboration with the HIV/AIDS Bureau of the Massachusetts Department of Public Health.

**The Needle Exchange Evaluation**

For copies of the final evaluation report, which will be available in the future, please call the HIV/AIDS Bureau at (617) 727-0368. Community representatives interested in developing local needle exchange programs should leave a voice mail message with Andy Epstein at the HIV/AIDS Bureau (voice mail extension 155).

*If you have other HIV-related resources (not calendar items) to announce, please call (617) 983-6570.*
*For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.*

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Jamaica Plain, MA 02130-3597

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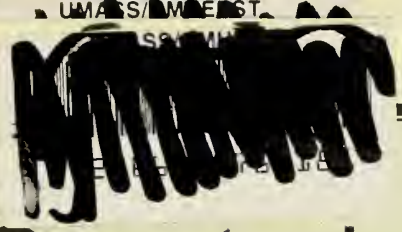

# Massachusetts HIV/AIDS Quarterly Review

GOVERNMENT DOCUMENTS COLLECTION
MAY 16 1996

**A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program**
**Vol. 3, No. 2 2nd Quarter April, 1996**

University of Massachusetts
Depository Copy

## MASSACHUSETTS HIV PREVENTION PLANNING GROUP

Early in 1994, the Centers for Disease Control and Prevention (CDC), required that all recipients of CDC-funded HIV prevention efforts convene community-based prevention planning groups. These planning groups were assigned the task of assisting with strategic planning at the local level for the prevention of HIV transmission. The purpose of this national initiative is to guarantee that the knowledge and insights of people from communities most affected by HIV, as well as that of behavioral scientists and other experts, are used to guide decisions about how money is distributed among affected populations and communities.

Since, Massachusetts receives much of its prevention funding from the state, the Massachusetts Department of Public Health (MDPH) HIV/AIDS Bureau also has requested that the Massachusetts HIV Prevention Planning Group (MPPG) advise on priorities for state funds.

**Inside.....**

MPPG Working Group Descriptions, pg. 2

MPPG Calendar and Guest Policy, pg. 4

AIDS Case Statistics, pg. 3

Computer Resources, pg. 5

Resources, pg. 6

Membership in the Planning Group was solicited from populations most affected by HIVinfection. There was an attempt to reflect the demographics of the epidemic in the state. In addition to representatives from affected communities, prevention planning groups also include people from the scientific community, representatives of state agencies and other experts in HIV prevention.

The MPPG completed its second full recruitment effort in the fall of 1995, and the current membership includes:

23% who represent the population of men who have sex with men;

14% who have experience related to injection drug use and/or other substance abuse;

21% who are African American;

15% who are Latino;

4% who are Haitian;

12% who are youth under 21 years of age or providers who work predominantly with youth, and

14% who are self-disclosed HIV positive.

The MPPG membership also includes representatives of state and county Departments of Correction, the Department of Mental Health, the Department of Education, the MDPH Bureau of Substance Abuse Services, STD Prevention, and AIDS Surveillance. The MPPG has struggled to have its membership reflect the diversity of the epidemic and the populations at risk for infection.

The MPPG meets monthly. Time is provided for the group to address issues as a unit and also for the full group to divide into working sub-committees to accomplish specific tasks.

These working groups include one that focuses on Needs Assessment, a group that addresses Evaluation, and one that focuses on the needs of Out-of-Treatment Injection Drug Users. Descriptions of the work of these three subcommittees is described later in this issue.

In the first two years, the MPPG has accomplished much, including:

- Advising the state on how and where to target $700,000 in new state funds (Fall 1994);
- Holding community forums in five regions of the state to get input on application to the CDC for Supplemental Funds (January 1995);
- Through the Needs Assessment subcommittee, conducting research in two communities in Massachusetts to begin to answer questions of "How can the adequacy of prevention in communities be assessed?" and "What are the economic, social, and

psychological barriers to HIV prevention?" and "What supports more effective prevention efforts?". The MPPG also held community meetings to help assess the generalizability of the findings across the state (1995);

ϖWith an evaluation contractor, completing a literature search of what works in prevention, conducting interviews with prevention providers about their use of behavioral science in their programs, and designing a new prevention data collection form (1995);

ϖAdvising the state on implementation of two new mini-grant programs, one to perform serosurveys of populations at risk, and one to offer financial support for provider training (Winter 1996);

ϖMoving to a new format focusing on targeted questions. The questions the MPPG are seeking to answer in the coming year are described below in respect to the working groups.

## MPPG WORKING GROUPS

Last year, the **Needs Assessment Working Group** worked with Abt Associates, a public health consulting firm, to conduct a prevention needs assessment. This needs assessment involved thorough case studies of two Massachusetts communities, Lynn and Springfield.

The results of this work were utilized in Prevention and Education Requests for Proposals (RFPs) released in August 1995 and October 1995, and will be utilized in the upcoming 1997 RFP process. Copies of the needs assessment will be available from the HIV/AIDS Bureau beginning in May, 1996.

For this year, the needs assessment committee is studying the question "What behaviors are young gay men engaging in and what can be done to encourage risk reduction?"

Working with an advisory panel of providers from Boston and Worcester, the group has designed a research plan which includes anonymous surveys of young gay men (ages 13-24) in Boston and Worcester to provide behavioral epidemiology information. Focus groups will be done with a smaller number of participants to gather more qualitative information about behaviors. This information will help the AIDS Bureau design and implement programs for youth at risk.

The **Evaluation Working Group** worked with an evaluation contractor in its first year. The work done by the contractor included an intensive literature review of "What Works in HIV Prevention", which included a behavioral science overview. They also surveyed HIV prevention providers on their use of behavioral science theories and made recommendations on possible outcome measures in studies of prevention interventions. This work resulted in trainings of the MPPG members and AIDS Bureau staff in behavioral science theories and in the development of a process evaluation tool for prevention and education interventions. This work is summarized in a report which is now available from the HIV/AIDS Bureau. The Evaluation Working Group continues to work to further disseminate this information.

This year, the Evaluation Working Group is pursuing an outcome evaluation sudy on the effectiveness of the HIV counseling and testing as a prevention intervention working with Hortensia Amaro, Ph.D., and a team from the Boston University School of Public Health. The working group has also discussed the effect of the 1994 counseling and testing amendment process on counseling and testing effectiveness. The MPPG had prioritized increased utilization of counseling and testing services by clients at significant risk, as indicated by 1993 counseling and testing seroprevalence data. Agencies were awarded money with the understanding that they would reach increased numbers and percentages of priority clients. The Department of Public Health monitored performance and continues to award funds based on performance.

The **Out-of-Treatment Injection Drug User Working Group** is the newest of the MPPG working groups. Based on epidemiological information which highlights the effect of injection drug use on HIV transmission and the recent success of the pilot needle exchange program in Boston and Cambridge, the group is attempting to get an overview of injection drug users in Massachusetts, what services (HIV prevention and others) they are provided with, and how this information compares with the literature on what interventions are most effective in reaching them.

For more information on any of the working groups or their activities and on how to obtain available reports call Kristin duBay at the HIV/AIDS Bureau (617) 624-5300

## ACCESSING AIDS INFORMATION THROUGH THE INTERNET

The amount of AIDS-related information available on the "Internet" increases daily. Although the following list is not comprehensive, it does offer a place to start on the journey through cyberspace. *Note: We apologize for any inconvenience that incorrect addresses due to address changes or non-responsive Internet sites may cause. Publication of these addresses does not imply endorsement of information supplied.*

**National AIDS Information Clearinghouse:**
*http://cdcnac.aspensys.com:86/nachrome.html*

**Center for AIDS Prevention Studies (UCSF):**
*http://www.epibiostat.ucsf.edu/capsweb/*

**World wide Web Virtual Library: AIDS**
*http://www.actwin.com/aids/vl.html*

**World Health Organization Global Program on AIDS**
*http://gpawww.who.ch./gpahome.htm*

**AIDS Information Newsletter**
*gopher://gopher.niad.nih.gov:70/11/aids/vaain*

**Critical Path AIDS Project (Clinical Trials and Treatment)**
*http://www.critpath.org*

**Glossary of HIV-related Medical Terms**
*http://www.smartlink.net/-martinjh/glossary.txt*

**AIDS Action Committee of Massachusetts**
*http://www.pn.com/org/aac*

**Justice Resource Institute HIV Infoweb**
*http://carebase2.jri.org/infoweb/*

**STOP AIDS PROJECT (San Francisco)**
*http://www.stopaids.org/*

## AIDS SURVEILLANCE SUMMARY

| | Massachusetts Diagnosed in '94* | | Massachusetts Cumulative | | United States** Cumulative | |
|---|---|---|---|---|---|---|
| Total cases reported as of 4/1/96 | 1,195 | | 11,392 | | 513,486 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 1,181 | | 11,203 | | 506,538 | |
| Male Sex w/Male | 394 | 33% | 4,965 | 44% | 259,672 | 51% |
| Injecting Drug Use | 438 | 37% | 3,600 | 32% | 128,696 | 25% |
| Male/Male Sex & IDU | 39 | 3% | 444 | 4% | 33,195 | 7% |
| Receipt of blood products | 13 | 1% | 367 | 3% | 11,540 | 2% |
| Heterosexual | 176 | 15% | 1,216 | 11% | 40,038 | 8% |
| Undetermined | 121 | 10% | 611 | 5% | 33,397 | 7% |
| **Transmission Mode (Pediatric)** | 14 | | 189 | | 6,948 | |
| Mother w/AIDS/HIV | 14 | 100% | 165 | 87% | 6,256 | 90% |
| Other/undetermined | | | 24 | 13% | 692 | 10% |
| **Gender** | | | | | | |
| Male | 936 | 78% | 9,392 | 82% | 438,294 | 85% |
| Female | 259 | 22% | 2,000 | 18% | 75,191 | 15% |
| **Mortality Status** | | | | | | |
| Alive | 850 | 71% | 3,971 | 35% | 193,637 | 38% |
| Dead | 345 | 29% | 7,421 | 65% | 319,849 | 62% |
| **Race/Ethnicity** | | | | | | |
| White | 620 | 52% | 6,912 | 61% | 243,107 | 47% |
| Black | 287 | 24% | 2,510 | 22% | 174,715 | 34% |
| Hispanic | 278 | 23% | 1,889 | 17% | 90,031 | 18% |
| Other/Unknown | 10 | 1% | 81 | 1% | 5,633 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | <15 | | 181 | 2% | 6,948 | 1% |
| 13 - 19 | | | 39 | 0% | 2,354 | 0% |
| 20 - 29 | 175 | 15% | 2,028 | 18% | 92,928 | 18% |
| 30 - 39 | 584 | 49% | 5,616 | 49% | 233,276 | 45% |
| 40 - 49 | 323 | 27% | 2,685 | 24% | 125,883 | 25% |
| Over 49 | 98 | 8% | 843 | 7% | 52,097 | 10% |

* Case reporting not complete for 1994.
** Total U.S. Cases reported as of January 1, 1996. Heterosexual cases formerly based on Pattern II criteria are now classified as "Undetermined."
Blanks indicate less than 5 cases reported.

## NOW AVAILABLE.....

The Massachusetts Department of Public Health HIV/AIDS Bureau Epidemiological Profile for FY 1996 is available. The profile was produced as part of the AIDS Bureau's CDC Cooperative Agreement Application and written in collaboration with other Bureaus within the Department of Public Health and the Massachusetts HIV Prevention Planning Group. It was developed with reference to the CDC Suggested Guidelines for Developing an Epidemiological Profile for HIV/AIDS Community Planning.

The profile attempts to answer four questions:
(1) What are the sociodemographic characteristics of the population? (2) What is the impact of HIV/AIDS on the population? (3) Who is at risk for becoming infected with HIV? and (4) What is the geographic distribution of HIV infection? These questions are explored through an analysis of cumulative and incident AIDS cases, estimates of current and future HIV infection rates and AIDS case growth, a description of targeted seroprevalence studies, a summary of other risk behavior profiles and of community-based HIV risk assessment information, and a discussion of the related health and risk behavior indicators. For copies, please contact the HIV/AIDS Bureau at (617) 624-5344.

## MASSACHUSETTS HIV PREVENTION PLANNING GROUP (Cont.)

### MPPG CALENDAR

Thursday, April 18
*Vision & Values Self Reflection Exercise*

Thursday, May 16
*Overview of the Counseling and Testing Intervention*
*What does the literature say about the risks young gay men are taking?*

Thursday, June 20
*Update from the Evaluator on Counseling and Testing Research*
*Who are Injection Drug Users in MA? What HIV/AIDS Bureau programs serve them?*

Thursday, July 18
*Report on the Young Gay Men Research from Abt Associates and a Provider panel*

Tuesday, September 17
*What interventions work for IDUs - Literature Review*

Thursday, October 17
*Final report on research about young gay men*

Thursday, November 14
*Follow up discussion on Counseling and Testing study*
*Final report from IDU working group*

Thursday, December 19
*Final report on Counseling and Testing evaluation*
*What is available from AIDS case data?*

If you are interested in attending an MPPG meeting and need directions or other information, please contact Kristin DuBay at the HIV/AIDS Bureau at (617)624-5300. All meetings are held at the Holiday Inn in Worcester.

### MPPG POLICY ON PUBLIC PARTICIPATION

All MPPG meetings are open to the public. However, at any time during an MPPG meeting, members may agree to move into *executive session*, at which time the general public may be asked to leave.

The day, time and location of MPPG meetings is available upon request. Members of the public should contact the HIV/AIDS Bureau if they plan to attend, so that seating arrangements can be made.

Minutes of the MPPG meetings will be made available, upon request, after they have been approved by the MPPG members.

To join the ***Friends of the MPPG*** mailing list to receive minutes and mailings call Divya Nirvayanan at the Medical Foundation (617) 451-0049.

# RESOURCES

## *A Message to Health Care Providers*

AIDS is designated as a reportable condition by under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence.

Please feel free to call the AIDS epidemiologists with any questions about case reporting:

| | |
|---|---|
| Jackie Cernieux, MPH | 983-6572 |
| Bill Coady, MPH | 983-6571 |
| Margaret Owen, MS, RN | 983-6573 |
| Minka vanBeuzekom, MPH | 983-6565 |

*If you have resources (not calendar items) to announce, please call (617) 983-6570.*
*For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.*

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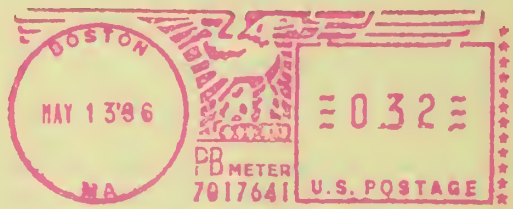


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# HIV/AIDS Quarterly Review

A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program
Vol. 3, No. 3 Third Quarter Summer, 1996

Massachusetts
Working Copy

## Protease Inhibitors: A New Class of Antiviral for HIV Infection

A new class of antiretrovirals, protease inhibitors (PI), have become important in managing the care of HIV-infected patients. This class of drugs offers renewed hope for many HIV+ individuals. This article provides an overview of the three available protease inhibitors; there are still others undergoing active development at this time.

*What are protease inhibitors ?*

So far, FDA approved antivirals for HIV have targeted two key steps in the virus life cycle. The "nucleoside analogs" (AZT, ddI, d4T, 3TC, ddC) target the initial step of reverse transcription, during which HIV turns its RNA into DNA, allowing it to integrate itself into human genes. All five drugs act as decoys of the building blocks of viral DNA, and will interfere with the transcription step.

The PI's target a later step in the life cycle. In order to reproduce itself from DNA, HIV first makes long protein molecules. These proteins must be cut by a "protease" enzyme in order to turn the proteins into the correct "size" to create virus. Protease *inhibitors* interfere with this step, resulting in virus with an empty outer envelope. These viruses are non-infectious. Subsequent immune cells are not attacked and destroyed by these defective viruses.

**Table 1 Nucleoside Antivirals**

| *Chemical Name* | *Trade Name* |
|---|---|
| zidovudine, AZT | Retrovir |
| didanosine, DDI | Videx |
| zalcitabine, DDC | Hivid |
| stavudine, d4T | Zerit |
| lamivudine, 3TC | Epivir |

*Why are protease inhibitors of interest?*

This class of drugs has earned much attention due to two major factors. First, there is no cross-resistance between the nucleoside analogs and protease inhibitors. Therefore patients who have immune decline despite having taken other drugs may still anticipate benefit from this new class. Second, the degree of viral suppression is often greater than seen with the nucleoside analogs. With one exception, each of the PI's are as effective as two of the nucleoside analogs combined. Since the two classes can be used together, degrees of viral suppression and immune recovery are significantly greater than observed with earlier treatment.

Each drug has unique features. This article provides a very brief overview of each. Data from available studies are presented by degree of CD4+ cell increase and range of viral suppression. For comparison, the nucleoside analogs, when used as monotherapy, typically provide about 60% viral suppression and in combination, about a 90% reduction in viral load is seen.

**Table 2 Protease Inhibitors**

| *Chemical* | *Trade Names* |
|---|---|
| saquinavir | Invirase |
| ritonavir | Norvir |
| indinavir | Crixivan |

**Saquinavir (Invirase, Roche)**

The first to be FDA-approved, some controversy exists about the use of this particular protease inhibitor. Despite excellent efficacy *in vitro,* like others in its class, only 4% of the dose of this drug reaches the bloodstream. Results of clinical studies of this agent have been less mixed. Studies have shown a range, from a minimal reduction in viral load to more than a 50%

**Inside.....**

**Protease Inhibitors (cont.), pg. 2**

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reduction, with CD4+ cell increases of around 50. These results are averages for multiple trials; better results, often at higher doses, have been reported in some patients taking this drug. Side effects have been infrequent and usually mild, making this one of the better tolerated agents.

The major controversy has been around the issue of cross resistance with other protease inhibitors. There is a small degree of potential overlap in resistance to saquinavir and the other drugs in this class. While the clinical significance is not yet known, the concern has been that initial use of this less potent agent will decrease the likelihood of an effect if one needs to switch to more potent agents.

Ongoing studies are directed at improving oral formulations, as well as using this agent in combination with the other protease inhibitors. Protease combination therapies are still in their infancy. It is possible however, that such combinations will provide significant benefit.

**Indinavir (Crixivan, Merck)**

This agent has shown significant effect in suppressing circulating virus. Most studies have shown 90-99% reduction in viral load, often with an average CD4+ cell increase of about 100 cells. When combined with other agents results have been even more impressive. In one of the most important studies, this drug was combined with AZT and 3TC. Initial results showed a 99% reduction in viral load, lasting for the first 12 months of the ongoing study. Of note is that the average CD4+ cell increase continues to be about 100-125 cells; this improvement may last longer than when other treatments are used.

A unique side effect of this drug has been the development of kidney stones in about 4% of patients. All patients taking this medication must be counseled to drink about 48 ounces of water per day. In addition, the drug must be taken three times per day on an empty stomach or with a no-fat meal as fat decreases absorption.

Studies of this agent have revealed a principle which is likely to be true for most of the members of this class. In studies of persons who took 1600 mg per day (2/3 of the standard dose), for four months, everyone developed evidence of viral resistance. Furthermore, subsequently increasing the dose to 2400 mg per day did not increase efficacy - resistance made further use of the drug ineffective. Therefore, patient compliance with proper dosing is vital to achieve persistent efficacy.

**Ritonavir (Norvir, Abbott)**

This agent, like indinavir, has shown significant evidence of efficacy. In studies of this drug, combined with AZT/ddC, there was a 99% reduction in viral load with an increase in the CD4+ cell count of over 100 cells. Studies show that this drug is effective in patients with advanced HIV-infection. It is these data that are so striking. In a study of persons with an average CD4+ cell count of about 20, ritonavir showed a 50% decrease in the rate of death and new AIDS-related infections. This improvement was noted even after six months of follow up. Along with this clinical benefit, there were improvements in lab findings, with an increase in the CD4+ cell count and a decrease in viral load. While the increase in the CD4+ cell count was about 50 cells, there were reports of some patients who had an increase of 270 cells - from 30 to greater than 300! Clearly, for some patients, this agent has shown dramatic effect.

There are, however issues with multiple drug interactions with ritonavir. Fortunately, commonly used medications such as antibiotics are not a problem. The side effect profile reveals a few other problems. There is an important issue of gastrointestinal intolerance, which in a few patients prevents its use entirely. Many patients have improved their tolerance by gradual dose increases over a 1-2 week period. Other side effects include mouth numbness and less frequently, diarrhea, altered liver function and elevated triglycerides in the blood. Because of their dramatic benefits these agents are very important in the treatment of people with HIV infection. Further information about optimal use will soon be forthcoming.

***The author, Calvin Cohen, MD is Research Director of the Community Research Initiative of New England and a physician at Harvard Pilgrim Health Care.***

***Note: Additional information not provided in this article is needed in order to use these medications for treatment..***

# Tewksbury Hospital: A Unique Resource at a Century and a Quarter

## History

Tewksbury Hospital is located 16 miles north of Boston, a few miles from Lowell, and minutes from routes 93 and 495. It is the largest of the Commonwealth's four Public Health hospitals and has a long history of providing care for the citizens of Massachusetts. The hospital was established in 1854 as an almshouse, and has since served in many roles, including veterans' hospital (following the Civil War), tuberculosis sanitarium, surgical, maternity and pediatric hospital. In recent years, Tewksbury Hospital is accredited by The Joint Commission for the Accreditation of Hospitals. Its mission is to provide comprehensive treatment, care, and comfort to adults with chronic medical and mental illness.

In August of 1994 the Hospital formally opened its AIDS inpatient service and since then has cared for more than 80 patients. The 24 bed unit is available for the specialized care of patients from all parts of the state. Patients are admitted from a variety of settings, including community acute care facilities, teaching hospitals, home rehabilitation centers, VNAs, hospice, nursing homes and shelters. The average age at admission is 38 years; 31% are female and 69% are male. The lengths of stay range from one week to over one year. Forty percent of discharges are to the community and 25% to acute care facilities. Terminal care has been provided to 35% of patients.

## AIDS Services

AIDS-related services are provided by an interdisciplinary team. The unit team receives ongoing training in the provision of up-to-date and compassionate care. There is 24 hour on-site physician and registered nurse coverage. The Medical Director of the AIDS service is board-certified in infectious disease with specialty training and research experience in AIDS. Medical consultation available at the hospital includes: dental, behavior neurology, gynecology, hematology-oncology, neurology ophthalmology, optometry, podiatry, psychiatry, psychology, pulmonary, and surgery. On-site radiology, pharmacy and laboratory services minimize transfers for services. Additional acute care services are accessed through local community hospitals.

***B.C. is a 35 year old man with HIV infection and active injecting drug use. He developed staphylococcal endocarditis with a secondary infection to the spine. After receiving two weeks of Intravenous vancomycin at an acute care hospital he was transferred to Tewksbury Hospital to complete an additional four weeks of intravenous vancomycin. He was discharged to home with follow-up via his attending physician from the acute care hospital.***

A wide range of therapies and specialized nursing services have been developed to meet patient needs. Rehabilitation therapies include: physical, occupational, pet, speech, respiratory, music, recreation and expressive therapy. Nursing care services incorporate wound, pain, bowel/bladder, and dysphagia management. Tewksbury Hospital uses an interdisciplinary team approach to patient needs-assessment and the design and implementation of treatment plans. In addition to the rehabilitation and nursing services the team includes representative social work, nutrition, medical, and mental health services.

Other services include an advisory council, a quality of life committee, a patient library, a recreation room, a chapel with multi-denominational pastoral services, and alcoholics and narcotics anonymous groups. There are also a resident greenhouse, a hospital canteen, a beauty shop and a barber.

Tewksbury Hospital is ideally suited to provide care to patients with complex AIDS-related problems at various levels of intensity which may not be available in other settings. The case description of two recent hospital discharges on this page highlight the needs that the program are meeting.

***G.M. is a 43 year old woman with diabetes, AIDS and cerebral toxoplasmosis who was hospitalized for approximately three months to control seizures, severe headaches, persistent nausea and vomiting, and dehydration. She was discharged to home with VNA services directed by her primary care physician.***

*To learn more about the unit Dr. Mike Murray, Medical Director for the AIDS Service at 508-851-7321 ext 2503. For patient admission information contact Ellen Prokop, RN, at 508-851-7321 ext 2426.*

# AIDS SURVEILLANCE SUMMARY

| | MA Cases Diagnosed in '95* | | Massachusetts Cumulative | | Alive in State | |
|---|---|---|---|---|---|---|
| Total cases reported as of 7/1/96 | 951 | | 11,637 | | 4,185 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | 939 | | 11,446 | | 4,107 | |
| Male Sex w/Male | 283 | 30% | 5,030 | 44% | 1,417 | 35% |
| Injecting Drug Use | 353 | 38% | 3,697 | 32% | 1,541 | 38% |
| Male/Male Sex & IDU | 29 | 3% | 454 | 4% | 130 | 3% |
| Receipt of blood products | 18 | 2% | 374 | 3% | 113 | 3% |
| Heterosexual | 131 | 14% | 1,245 | 11% | 559 | 14% |
| Undetermined | 125 | 13% | 646 | 6% | 347 | 8% |
| **Transmission Mode (Pediatric)** | 12 | | 191 | | 78 | |
| Mother w/AIDS/HIV | 10 | 83% | 168 | 88% | 71 | 91% |
| Other/undetermined | | | 23 | 12% | 7 | 9% |
| **Gender** | | | | | | |
| Male | 709 | 75% | 9,574 | 82% | 3,228 | 77% |
| Female | 242 | 25% | 2,063 | 18% | 957 | 23% |
| **Race/Ethnicity** | | | | | | |
| White | 506 | 53% | 7,031 | 60% | 2,193 | 52% |
| Black | 211 | 22% | 2,566 | 22% | 1,036 | 25% |
| Hispanic | 225 | 24% | 1,958 | 17% | 922 | 22% |
| Other/Unknown | 9 | 1% | 82 | 1% | 34 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 10 | | 183 | 2% | 73 | 2% |
| 13 - 19 | | | 40 | 0% | 20 | 0% |
| 20 - 29 | 136 | 14% | 2,064 | 18% | 777 | 19% |
| 30 - 39 | 480 | 50% | 5,735 | 49% | 2,089 | 50% |
| 40 - 49 | 247 | 26% | 2,755 | 24% | 991 | 24% |
| Over 49 | 74 | 8% | 860 | 7% | 235 | 6% |

* Case reporting not complete for 1995.

Blanks indicate less than 5 cases reported.

## Comments on Reporting Lag:

Reporting lag can be described as the time between an AIDS case diagnosis and the date of report of that case. Ideally, all AIDS cases should be reported at the time of diagnosis by the diagnosing health care provider. A lag may occur between the time of diagnosis and the date of report resulting in an inaccurate description of the trends in the epidemic.

In Massachusetts, 65 percent of AIDS cases are reported within six months of diagnosis. This means that for the present calendar year, most AIDS cases will be reported by July of the following year. Within a year of diagnosis, 85-90 percent of AIDS cases will be reported. This proportion represents a completeness of reporting well above that for most reportable communicable diseases.

# Incidence and Prevalence Among Massachusetts AIDS Cases

Incidence and prevalence are measures of disease frequency in a population. These measures are frequently used by the Massachusetts AIDS Surveillance Program to determine the rate of growth, magnitude and direction of the AIDS epidemic in Massachusetts. In addition, the AIDS Bureau uses them to determine regional and population-based group funding formula guidelines for prevention and services.

*Incident* cases are those newly diagnosed in a specific time period (often one year). The number of Massachusetts residents diagnosed in 1995 with AIDS is the incidence for that year (see Table 1). The incidence can be used to compare disease frequency between different time periods and among different populations. It also helps to show the impact of prevention on infection and disease.

Knowing who has AIDS at a given time is important for resource allocation. Prevalence is the number or proportion of people in a population with active disease at one particular time. As an example, the prevalence of Massachusetts AIDS cases in 1995 would be those diagnosed in 1995 plus those previously diagnosed and still alive. Practically speaking, prevalence is synonymous with the number of individuals alive with AIDS. Table 2 shows the prevalence of AIDS cases by year in Massachusetts. These numbers are useful in the planning and delivery of HIV/AIDS services in the state.

Prevalence is determined by disease incidence and duration (length of life from diagnosis to death).

**Table 1: AIDS Cases Diagnosed by Year in MA**

| Year | Incidence |
|---|---|
| 1980 | 1 |
| 1981 | 8 |
| 1982 | 22 |
| 1983 | 73 |
| 1984 | 150 |
| 1985 | 252 |
| 1986 | 416 |
| 1987 | 687 |
| 1988 | 890 |
| 1989 | 1010 |
| 1990 | 1075 |
| 1991 | 1312 |
| 1992 | 1680 |
| 1993 | 1652 |
| 1994 | 1208 |
| 1995* | 951 |

It is important to examine both measures when looking at an epidemic. Lower incidence, but longer duration results in high prevalence relative to incidence. Conversely, a high incidence coupled with short disease duration leads to a low prevalence rate relative to incidence. When the AIDS epidemic began in Massachusetts, the incidence of AIDS cases was high and the disease duration was short, (a high mortality rate existed) resulting in lower prevalence. In more recent years, AIDS case incidence appears to have stabilized and even declined, while the duration of disease has lengthened due to

**Table 2: Number of People Alive with AIDS by Year in MA**

| Year | Prevalence |
|---|---|
| 1980 | 2 |
| 1981 | 8 |
| 1982 | 29 |
| 1983 | 97 |
| 1984 | 210 |
| 1985 | 387 |
| 1986 | 663 |
| 1987 | 1122 |
| 1988 | 1661 |
| 1989 | 2215 |
| 1990 | 2712 |
| 1991 | 3364 |
| 1992 | 4214 |
| 1993 | 4946 |
| 1994 | 5110 |
| 1995* | 4892 |

successful medical and public health interventions. Therefore, despite this decline the number of individuals living with AIDS and requiring services remains high.

***Note: Recent AIDS case incidence and prevalence appear to decline while estimates of the number of HIV-infected individuals increases. This is likely due to the effects of treatment and medications on the progression from HIV infection to CDC-defined AIDS, as well as an AIDS case reporting lag (see AIDS Surveillance Summary)***

# RESOURCES

## *Message to Health Care Providers*

AIDS is designated as a reportable condition under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources. AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call AIDS Surveillance with any questions about case reporting at (617) 983-6560.

*If you have resources (not calendar items) to announce, please call (617) 983-6571. For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Surveillance at (617)983-6560.*

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# Massachusetts HIV/AIDS Quarterly Review

*A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program Summer, 1997*

## Interview with David H. Mulligan, Public Health Commissioner May 14, 1997

**Q: I am wondering about your early experiences with AIDS during your time at the Substance Abuse Bureau.**

A: Very early on I became aware of the epidemic as an issue for a substance abuse agency. We adopted a policy in 1986 to prioritize injecting drug users to get preference for treatment access because we were aware of HIV transmission. Before I became Commissioner, I was involved in an effort to expand the number of methadone sites around the state, to address this need. We had seven sites when we started and thirty when we finished. We went through some stormy community meetings, and there was a lot of conflict. In fact, thinking back on it, the process of setting up those sites, more than anything else, had a lot to do with my becoming Commissioner. I received a lot of attention statewide.

**Q: How did you negotiate the barriers that you're talking about, the community conflict?**

A: I remember there was a very stormy meeting about siting a methadone program in Brockton and the police chief was there. And he said "There'll be no methadone in this community unless it's in my parking lot". About two months later, I went and talked to him. I said, "If I could do a van, would you be open to using the parking lot?" He was surprisingly open to this idea. That led to some meetings in Washington and resulted in the first mobile methadone van in the United States. Each site was it's own story and struggle. We didn't get everything we wanted, but we got a lot of sites open. I wish we were doing as well with needle exchange. That's a tougher issue. But the methadone effort was a good thing. I think we saved some lives. I think we got people into treatment.

**Q: What about condom availability in schools?**

A: Some local school systems passed condom availability in high schools after brutal fights. But they put many parameters around it. If you're going to do it, you have to make the condoms reasonably available. Seventy percent of our high school graduates have had sexual intercourse. We need to protect them. That's why I'm a firm believer in helping kids to make good choices. Our number one approach is to support abstinence. But if you're going to be sexually active, use a condom.

**Q: What resonated with you personally, that made you want to work on AIDS?**

A: Seeing young people die. We had four colleagues at the MDPH die. I knew them well. There was an unbelievably great community of people that came together. That was really important in dealing the epidemic. They informed the community of providers and consumers.

**Q: Would you speak about how consumer involvement came about?**

A: The department, from the very beginning, seemed to be close to the HIV+ consumers and the community of people who were affected. We had many young gay men and injecting drug users in recovery come and work with us. It was out of that closeness that we began to incorporate consumers in a fuller way, in decision making and planning. The gay community was terrific at the beginning of the epidemic, they wanted to take control over the illness in a healthy way, much more so than most people do over illness.

**Q: Will you be teaching any courses on AIDS when you take your faculty position at Stonehill College?**

A: Yes, I'm teaching a course on AIDS and substance abuse in prisons. AIDS is an incredibly poignant issue and it's created such tragedy. It's related to some of the big themes that we deal with in our society. It's becoming more of a illness of poorer people. It's related to the distribution of wealth, it's related to drug use which is one of our major problems. Our society is unwilling to talk about sex, drugs, or needles. That makes prevention tough. The price we pay is more infections. We need to keep urging people to be frank.

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# Reducing the Risk of Mother to Infant HIV Transmission

At the end of April, the Department of Public Health sponsored billboards on the Massachusetts Turnpike and on the Southeast Expressway with an exciting new prevention message directed at pregnant women -

**THE MORE YOU KNOW ABOUT HIV,**
**THE MORE YOU CAN DO FOR YOURSELF**
**AND YOUR BABY!**

**Find Out About Testing. Find Out About Care.**

This campaign is another initiative by the Massachusetts Department of Public Health (MDPH) to reduce the incidence of pediatric HIV infection. Pediatric AIDS cases represent 2% of total cases in the state. New protocols for reducing the risk of mother to infant (perinatal) HIV transmission were introduced in 1994. In Massachusetts, perinatal transmission of HIV has significantly decreased in the last few years. There are several indications that health care providers and women are increasingly aware of the importance of perinatal HIV counseling, testing and zidovudine (AZT) treatment as a means of decreasing the risk of transmission:

- Greater numbers of women are accessing publicly funded HIV counseling and testing services. In 1992, a total of 360 women indicated "Prenatal/Ob Gyn" as the reason for HIV counseling and testing. This figure increased to 428 in 1993, 999 in 1994, and 1716 in 1995.

- The likelihood of those women who know their HIV status taking AZT during pregnancy, to reduce the risk of HIV transmission, has increased to almost 95%.

- Those children who are perinatally HIV-exposed or HIV-infected are more likely to be identified and linked to care soon after delivery.

- The number of pediatric AIDS cases has decreased dramatically. In 1993, 20 children were diagnosed with AIDS as a result of perinatal transmission and in 1996, there were only 10 children.

These positive indicators can be attributed to improved prevention and education efforts focused on women as well as the increasingly common clinical practice of offering universal HIV counseling and voluntary testing to all pregnant women (as recommended by MDPH and CDC). Some highlights of MDPH efforts to reduce perinatal HIV transmission include:

- Release of clinical advisory in November of 1994 for health care providers, encouraging universal HIV counseling and voluntary testing for all pregnant women and protocols for administering AZT during the perinatal period;

- Development and distribution of consumer-focused brochures to explain HIV counseling and voluntary testing during pregnancy, as well as the risks and benefits associated with taking AZT during pregnancy; and

- Development and implementation of an HIV education, counseling and testing training curriculum for perinatal providers, done in collaboration with the New England AIDS Education and Training Center (NEAETC);

- Implementation of Mass-CAP, the Massachusetts Women's HIV Care and Advocacy Program. This program utilizes regional nurses and peer advocates to support health care providers in their efforts to implement the CDC recommendations for prevention of perinatal HIV transmission.

- Training series for Ob/Gyn providers done in conjunction with the NEAETC, Medicaid and the local office of the Health Care Finance Administration. The first program was conducted at Morton Hospital and Medical Center on June 9th, 1997.

On April 23, 1997, Commissioner Mulligan introduced the new media campaign. He was joined by the co-chairs of the legislature's Health Care Committee, Senator Mark Montigny and Representative Harriette Chandler. Representative Kevin Poirier, who has been active in encouraging universal HIV counseling and voluntary testing for pregnant women, spoke as well. The group was also joined by Connie Amaral, an active participant in the Consumer Advisory System for the HIV/AIDS Bureau and a peer advocate for the Massachusetts Women HIV Care and Advocacy Program.

Over the next few months the public information campaign will be directed at both pregnant women and healthcare providers who work with them. In addition to the billboards, other aspects of the campaign include:

- Posters in English, Spanish, Portuguese and French
- Patient brochures, "HIV & Pregnancy, What You Need to Know", in four languages
- Radio Public Service Announcements in four languages
- Statewide bus and subway transit cards in English and Spanish

Posters and patient brochures will be available through the public information office of the HIV/ AIDS Bureau, as well as through the regional nursing staff of the MassCAP Program.

# AIDS SURVEILLANCE SUMMARY

| | MA Cases Diagnosed in '96* | | Massachusetts Cumulative | | Alive in State | |
|---|---|---|---|---|---|---|
| Total cases reported as of 07/1/97 | 752 | | 12,504 | | 4,452 | |
| | No. | % | No. | % | No. | % |
| **Transmission Mode (Adults)** | **741** | | **12,306** | | **4,369** | |
| Male Sex w/Male | 207 | 28% | 5,161 | 42% | 1,405 | 32% |
| Injecting Drug Use | 289 | 39% | 4,172 | 34% | 1,701 | 39% |
| Male/Male Sex & IDU | 11 | 1% | 479 | 4% | 141 | 3% |
| Receipt of blood products | 9 | 1% | 326 | 3% | 94 | 2% |
| Heterosexual** | 103 | 14% | 1,060 | 9% | 517 | 12% |
| Undetermined (NIR)** | 122 | 16% | 1,108 | 9% | 511 | 12% |
| **Transmission Mode (Pediatric)** | **11** | | **198** | | **83** | |
| Mother w/AIDS/HIV | 9 | 82% | 173 | 87% | 76 | 92% |
| Receipt of blood/products | | | 23 | 12% | 6 | 7% |
| Other/undetermined | | | | | | |
| **Gender** | | | | | | |
| Male | 560 | 74% | 10,184 | 81% | 3,391 | 76% |
| Female | 192 | 26% | 2,320 | 19% | 1,061 | 24% |
| **Race/Ethnicity** | | | | | | |
| White | 350 | 47% | 7,355 | 59% | 2,235 | 50% |
| Black | 193 | 26% | 2,837 | 23% | 1,120 | 25% |
| Hispanic | 200 | 27% | 2,212 | 18% | 1,058 | 24% |
| Other/Unknown | 9 | 1% | 100 | 1% | 39 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 10 | 1% | 189 | 2% | 77 | 2% |
| 13 - 19 | | | 42 | 0% | 19 | 0% |
| 20 - 29 | 82 | 11% | 2,151 | 17% | 783 | 18% |
| 30 - 39 | 361 | 48% | 6,153 | 49% | 2,206 | 50% |
| 40 - 49 | 230 | 31% | 3,043 | 24% | 1,105 | 25% |
| Over 49 | 67 | 9% | 926 | 7% | 262 | 6% |

**Blanks indicate less than 5 cases reported.**

## UPDATE ON MONTHLY REPORTS:

* In keeping with current CDC guidelines, total numbers for the state no longer include cases that reside in a state other than Massachusetts at the time of diagnosis. **Monthly statistics now reflect Massachusetts residents only.**

** In accordance with CDC recommendations, cases originally from a country where the predominant mode of transmission is "heterosexual with unknown risk of partner" (Pattern II Country) have been reclassified. These cases have been recategorized from "heterosexual from a Pattern II Country" to "No Identified Risk" (NIR), as indicated in the above table. The heterosexual transmission category applies to individuals who were sexually active with someone known to be HIV-infected or at high risk of infection (e.g. an individual with injecting drug use). Other analyses may estimate a proportion of NIR cases as probable heterosexual transmission.

## Characteristics of AIDS Cases in Cities/Towns in Massachusetts with more than 60 Cases as of April 1, 1997

| City/Town | Pop. | Cases | Age Group | | | | | | | | | | Race/Ethnicity | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0-19 | | 20-29 | | 30-39 | | 40-49 | | 50+ | | White | | Black | | Latino | |
| Boston | 574283 | 4254 | 62 | 1% | 719 | 17% | 2145 | 50% | 1015 | 24% | 313 | 7% | 2214 | 52% | 1535 | 36% | 472 | 11% |
| Brockton | 92788 | 250 | 7 | 3% | 34 | 14% | 115 | 46% | 73 | 29% | 21 | 8% | 121 | 48% | 96 | 38% | 30 | 12% |
| Brookline | 54718 | 132 | 0 | 0% | 16 | 12% | 72 | 55% | 32 | 24% | 12 | 9% | 115 | 87% | 8 | 6% | 7 | 5% |
| Cambridge | 95802 | 328 | 7 | 2% | 58 | 18% | 167 | 51% | 82 | 25% | 14 | 4% | 178 | 54% | 115 | 35% | 31 | 9% |
| Chelsea | 28710 | 96 | | | 18 | 19% | 49 | 51% | 25 | 26% | | | 53 | 55% | 17 | 18% | 26 | 27% |
| Chicopee | 56632 | 74 | 5 | 7% | 12 | 16% | 30 | 41% | 19 | 26% | 8 | 11% | 51 | 69% | | | 18 | 24% |
| Everett | 35701 | 80 | | | 11 | 14% | 40 | 50% | 20 | 25% | 7 | 9% | 51 | 64% | 20 | 25% | 9 | 11% |
| Fall River | 92703 | 121 | | | 17 | 14% | 60 | 50% | 33 | 27% | 9 | 7% | 108 | 89% | 7 | 6% | 5 | 4% |
| Framingham | 64989 | 80 | | | 20 | 25% | 33 | 41% | 19 | 24% | 5 | 6% | 43 | 54% | 14 | 18% | 23 | 29% |
| Holyoke | 43704 | 188 | 9 | 5% | 35 | 19% | 95 | 51% | 38 | 20% | 11 | 6% | 46 | 24% | 7 | 4% | 135 | 72% |
| Lawrence | 70207 | 198 | 8 | 4% | 39 | 20% | 96 | 48% | 40 | 20% | 15 | 8% | 47 | 24% | 11 | 6% | 139 | 70% |
| Lowell | 103439 | 235 | 7 | 3% | 43 | 18% | 117 | 50% | 54 | 23% | 14 | 6% | 117 | 50% | 14 | 6% | 101 | 43% |
| Lynn | 81245 | 207 | | | 36 | 17% | 92 | 44% | 56 | 27% | 20 | 10% | 125 | 60% | 43 | 21% | 38 | 18% |
| Malden | 53884 | 115 | | | 24 | 21% | 53 | 46% | 30 | 26% | 7 | 6% | 81 | 70% | 28 | 24% | | |
| Medford | 57407 | 71 | | | 12 | 17% | 33 | 46% | 14 | 20% | 9 | 13% | 50 | 70% | 20 | 28% | | |
| N.Bedford | 99922 | 415 | 9 | 2% | 64 | 15% | 215 | 52% | 100 | 24% | 27 | 7% | 235 | 57% | 83 | 20% | 96 | 23% |
| Newton | 82585 | 64 | | | 12 | 19% | 23 | 36% | 21 | 33% | 7 | 11% | 55 | 86% | 8 | 13% | | |
| Province. | 3561 | 242 | 0 | 0% | 27 | 11% | 130 | 54% | 69 | 29% | 16 | 7% | 233 | 96% | | | 5 | 2% |
| Quincy | 84985 | 154 | | | 22 | 14% | 89 | 58% | 33 | 21% | 8 | 5% | 129 | 84% | 12 | 8% | 11 | 7% |
| Revere | 42786 | 102 | | | 22 | 22% | 51 | 50% | 19 | 19% | 8 | 8% | 91 | 89% | 8 | 8% | | |
| Salem | 38091 | 81 | | | 20 | 25% | 32 | 40% | 27 | 33% | 0 | 0% | 66 | 81% | | | 11 | 14% |
| Somerville | 76210 | 201 | | | 42 | 21% | 99 | 49% | 45 | 22% | 11 | 5% | 141 | 70% | 46 | 23% | 11 | 5% |
| Springfield | 156983 | 712 | 12 | 2% | 126 | 18% | 352 | 49% | 169 | 24% | 53 | 7% | 174 | 24% | 242 | 34% | 294 | 41% |
| Taunton | 49832 | 60 | | | 12 | 20% | 34 | 57% | 11 | 18% | | | 37 | 62% | 10 | 17% | 11 | 18% |
| Worcester | 169759 | 552 | 9 | 2% | 108 | 20% | 274 | 50% | 125 | 23% | 36 | 7% | 251 | 45% | 91 | 16% | 207 | 38% |
| STATE | 6016425 | 12257 | 227 | 2% | 2122 | 17% | 6045 | 49% | 2956 | 24% | 907 | 7% | 7239 | 59% | 2768 | 23% | 2153 | 18% |

Note: Cell sizes less than 5 are not reported, and are represented by blank cells.
Prisoners are not included in city/town figures, but are included in the state totals.

## Characteristics of AIDS Cases in Cities/Towns in Massachusetts with more than 60 Cases as of April 1, 1997

| City/Town | Mode of Transmission | | | | | | | | | | | | | | Gender | | | | Mortality | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MSM* | | IDU | | MSM & IDU | | Hetersx | | Blood Products | | No Risk Specified | | Pedi | | Male | | Female | | Alive as of 4/1/97 | % Alive |
| Boston | 2180 | 51% | 1068 | 25% | 159 | 4% | 285 | 7% | 75 | 2% | 428 | 10% | 59 | 1% | 3611 | 85% | 643 | 15% | 1463 | 34% |
| Brockton | 52 | 21% | 104 | 42% | 8 | 3% | 37 | 15% | 10 | 4% | 33 | 13% | 6 | 2% | 182 | 73% | 68 | 27% | 85 | 34% |
| Brookline | 105 | 80% | | | | | | | 6 | 5% | 10 | 8% | 0 | | 126 | 95% | 6 | 5% | 38 | 29% |
| Cambridge | 162 | 49% | 49 | 15% | 8 | 2% | 25 | 8% | 11 | 3% | 69 | 21% | | | 275 | 84% | 53 | 16% | 117 | 36% |
| Chelsea | 41 | 43% | 22 | 23% | | | 12 | 13% | | | 11 | 11% | | | 79 | 82% | 17 | 18% | 39 | 41% |
| Chicopee | 25 | 34% | 20 | 27% | 0 | | 13 | 18% | | | 9 | 12% | | | 54 | 73% | 20 | 27% | 30 | 41% |
| Everett | 25 | 31% | 24 | 30% | | | 13 | 16% | | | 12 | 15% | | | 57 | 71% | 23 | 29% | 27 | 34% |
| Fall River | 42 | 35% | 50 | 41% | | | 7 | 6% | 8 | 7% | 9 | 7% | | | 87 | 72% | 34 | 28% | 56 | 46% |
| Framingham | 31 | 39% | 25 | 31% | | | 9 | 11% | 5 | 6% | | | | | 56 | 70% | 24 | 30% | 30 | 38% |
| Holyoke | 19 | 10% | 114 | 61% | | | 34 | 18% | | | 6 | 3% | 9 | 5% | 126 | 67% | 62 | 33% | 81 | 43% |
| Lawrence | 17 | 9% | 103 | 52% | 6 | 3% | 36 | 18% | 7 | 4% | 21 | 11% | 8 | 4% | 141 | 71% | 57 | 29% | 89 | 45% |
| Lowell | 42 | 18% | 125 | 53% | 11 | 5% | 28 | 12% | 5 | 2% | 18 | 8% | 6 | 3% | 170 | 72% | 65 | 28% | 85 | 36% |
| Lynn | 47 | 23% | 104 | 50% | 7 | 3% | 25 | 12% | | | 19 | 9% | | | 151 | 73% | 56 | 27% | 82 | 40% |
| Malden | 60 | 52% | 20 | 17% | 5 | 4% | 12 | 10% | | | 14 | 12% | | | 99 | 86% | 16 | 14% | 40 | 35% |
| Medford | 34 | 48% | 8 | 11% | 5 | 7% | | | 7 | 10% | 10 | 14% | | | 56 | 79% | 15 | 21% | 28 | 39% |
| N.Bedford | 60 | 14% | 263 | 63% | 12 | 3% | 37 | 9% | 6 | 1% | 28 | 7% | 9 | 2% | 297 | 72% | 118 | 28% | 157 | 38% |
| Newton | 41 | 64% | 8 | 13% | 0 | 0% | 8 | 13% | | | | | | | 54 | 84% | 10 | 16% | 24 | 38% |
| Province. | 215 | 89% | | | 18 | 7% | | | | | | | 0 | 0% | 239 | 99% | | | 77 | 32% |
| Quincy | 76 | 49% | 51 | 33% | 6 | 4% | 8 | 5% | | | 7 | 5% | | | 127 | 82% | 27 | 18% | 56 | 36% |
| Revere | 60 | 59% | 28 | 27% | | | 5 | 5% | 0 | 0% | | | | | 85 | 83% | 17 | 17% | 27 | 26% |
| Salem | 35 | 43% | 20 | 25% | 8 | 10% | 7 | 9% | | | 6 | 7% | | | 69 | 85% | 12 | 15% | 26 | 32% |
| Somerville | 98 | 49% | 34 | 17% | 5 | 2% | 15 | 7% | | | 41 | 20% | | | 160 | 80% | 41 | 20% | 69 | 34% |
| Springfield | 142 | 20% | 388 | 54% | 28 | 4% | 95 | 13% | 10 | 1% | 40 | 6% | 9 | 1% | 518 | 73% | 194 | 27% | 274 | 38% |
| Taunton | 13 | 22% | 25 | 42% | | | 8 | 13% | | | 5 | 8% | | | 46 | 77% | 14 | 23% | 23 | 38% |
| Worcester | 102 | 18% | 288 | 52% | 29 | 5% | 79 | 14% | 11 | 2% | 35 | 6% | 8 | 1% | 378 | 68% | 174 | 32% | 241 | 44% |
| STATE | 5083 | 41% | 4053 | 33% | 474 | 4% | 1023 | 8% | 324 | 3% | 1105 | 9% | 193 | 2% | 9993 | 82% | 2264 | 18% | 4386 | 36% |

*-MSM indicates men having sex with men

Note: Cell sizes less than 5 are not reported, and are represented by blank cells.
Prisoners are not included in city/town figures, but are included in the state totals.

# RESOURCES

***A Message to Health Care Providers***

AIDS is designated as a reportable condition by under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance at (617) 983-60 with any questions about case reporting.

If you have resources (not calendar items) to announce, please call (617) 983-6570. For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.

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# HIV/AIDS Quarterly Review

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*A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program Fall 1997*

## ACT Now Program Strengthens Access to Primary Care

Recently it was announced that deaths from AIDS have dramatically decreased in Massachusetts. The decrease from 1995 to 1996 was 29%; significantly greater than the national decrease of 18% and the decreases in other high prevalence states, like Florida and New York.

While there are many theories as to why the Massachusetts rate fell so precipitously, many people attribute the size of the decrease in large part to the Access to Care and Treatment (ACT) Now Program. This unique Massachusetts initiative provides free access to primary care for uninsured and underinsured HIV-infected people at more than fifty sites around the state. The $3.8 million program currently serves about 2,800 people and has served almost 6,000 since its inception in December 1991.

Linda Amicone, RN, the Director of the ACT Now Program, states that "the ACT Now Program has had a dramatic impact on the reduction of illness and death among HIV positive people by eliminating barriers to primary care at all stages of infection, but particularly for those who are recently infected and not yet symptomatic". In fact, since its beginnings, ACT Now has primarily enrolled clients who are asymptomatic. When it began in 1991 there were few, if any, treatment options for those in the early stage of infection. However, good primary care optimizes overall client health and ensures a link to more and more treatments as they develop.

In the recent MDPH Request for Responses, there were some important changes in the ACT Now Program. Six regional HIV Primary Care Support Centers were funded to provide a broad array of services to a large number of HIV-positive patients. All of the funded centers serve more than 200 HIV-positive patients and some as many as 700. These Centers will play an important role in providing clinical education and consultation to other ACT Now and health care providers in the regions. Such activities are increasingly important as HIV care becomes more complicated with new medications, viral load testing and other laboratory follow-up.
The funded regional Centers are:

- Baystate Medical Center
- Boston Medical Center
- Cambridge Hospital
- Fenway Community Health Center
- Outer Cape Health Center
- University of Massachusetts Medical Center

More than 40 other sites are local ACT Now primary care providers. These sites range in size and available on-site services, although all provide medical, nursing and laboratory services. Other services offered at many ACT Now sites include mental health care, social services, nutrition services, limited complementary therapies (such as acupuncture and massage), opthalmology/optometry, dermatology and limited dental services. Among the new sites funded in the recent competition are the Springfield Southwest Health Center and Cape Cod Hospital.

One consumer from Central Massachusetts spoke of the impact of ACT Now on a friend who enrolled in the program and received dental care at a point when the problems with her teeth were causing her to eat poorly, lose weight and become more vulnerable to infection. "Without this program who knows how severely her health would have deteriorated. Instead, she is now healthy and eating well."

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A Guide To AIDS Surveillance in Massachusetts.....pgs. 5&6

# HIV COUNSELING AND TESTING EVALUATION DOCUMENTS PREDICTORS OF POSITIVE BEHAVIOR CHANGE

A study conducted by the Boston University School of Public Health, under the direction of Dr. Hortensia Amaro, has documented the prevention value and predictors of positive behavior change among clients of publicly-funded HIV Counseling and Testing. Funded by the MDPH AIDS Bureau, the study was designed to evaluate the effectiveness of Counseling and Testing in promoting behavior change and in linking clients to services. The study represents one of the most comprehensive evaluations of HIV Counseling and Testing to date.

Findings confirm the experience of providers and illustrate challenges to be addressed by MDPH and providers of HIV Counseling and Testing across the Commonwealth. The study performed 939 client surveys, with a remarkable 73% post test follow-up rate. Participants in the study represented a diverse geographic and demographic cross-section of those seeking antibody testing, with an over-sampling of racial minorities to assure adequate representation. The study found that:

- A significant portion of clients decrease risk behaviors with non-main partners in the three months following HIV Counseling and Testing.
- A significant portion of men who have sex with men stop having anal sex or improve or maintain protective behaviors in the three months following HIV Counseling and Testing.
- A significant portion of drug users decrease risk by stopping drug use or by maintaining or improving protective behaviors in the three months following HIV Counseling and Testing.
- A male partner's opinion about condom use is the most influential factor in determining a woman's sexual risk.
- A strong sense of self-efficacy is a critical factor in reducing sexual risk and drug use.
- Clients with a history of sexual coercion are less likely to reduce their sexual risk for infection.
- Clients reported an increase in services used from pre-test to post-test.

There are important implications for practice that emerge from the evaluation. First, it is clear that a significant number of clients presenting for HIV Counseling and Testing have complex characteristics such as a history of substance abuse, a history of being sexually coerced, a history of exchange of sex for drugs or money, or a history of high sexual risk for HIV. This evaluation documents the fact that these characteristics are strong predictors of whether a client successfully reduces risk. It is also clear that while pre- and post-test counseling is an effective short term intervention, the sessions as currently designed do not address complex psycho-social risk factors. More intensive interventions may be needed as adjuncts to HIV Counseling and Testing. What should be the content of these adjunct interventions?

Second, the significance for women of a partner's attitude toward condom use is clear. What interventions can be developed for couples and male partners? Can interventions be designed that successfully change partners' attitudes, facilitate negotiation in relationships, and at the same time attend to power dynamics between men and women and the risk of physical or emotional violence that some women face?

Finally, a strong sense of self-efficacy regarding the ability to take concrete steps to reduce risk and a sense of power in determining sexual relationships are important predictors of successful risk reduction. *How can other prevention efforts enhance these skills for those most at risk for infection?* These questions and others will be addressed in the ongoing partnership between MDPH, the Boston University School of Public Health, providers of HIV Counseling and Testing and the Massachusetts HIV Prevention Planning Group (MPPG).

If you would like a written summary of the findings, contact Shelli Smith at (617) 624-5350.

# AIDS SURVEILLANCE SUMMARY

| | MA Cases Diagnosed in '96* | | Massachusetts Cumulative | | Alive in State | |
|---|---|---|---|---|---|---|
| Total cases reported as of 10/1/97 | **794** | | **12,703** | | **4,564** | |
| | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Transmission Mode (Adults)** | **781** | | **12,500** | | **4,479** | |
| Male Sex w/Male | 220 | 28% | 5,203 | 42% | 1,425 | 32% |
| Injecting Drug Use | 316 | 40% | 4,278 | 34% | 1,766 | 39% |
| Male/Male Sex & IDU | 11 | 1% | 490 | 4% | 145 | 3% |
| Receipt of blood products | 12 | 2% | 326 | 3% | 98 | 2% |
| Heterosexual** | 115 | 15% | 1,102 | 9% | 550 | 12% |
| Undetermined (NIR)** | 107 | 14% | 1,101 | 9% | 495 | 11% |
| **Transmission Mode (Pediatric)** | **13** | | **203** | | **85** | |
| Mother w/AIDS/HIV | 11 | 85% | 177 | 87% | 77 | 91% |
| Receipt of blood/products | | | 24 | 12% | 7 | 8% |
| Other/undetermined | | | | | | |
| **Gender** | | | | | | |
| Male | 586 | 74% | 10,328 | 81% | 3,461 | 76% |
| Female | 208 | 26% | 2,375 | 19% | 1,103 | 24% |
| **Race/Ethnicity** | | | | | | |
| White | 372 | 47% | 7,438 | 59% | 2,279 | 50% |
| Black | 207 | 26% | 2,895 | 23% | 1,152 | 25% |
| Hispanic | 207 | 26% | 2,272 | 18% | 1,094 | 24% |
| Other/Unknown | 8 | 1% | 98 | 1% | 39 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 12 | 2% | 194 | 2% | 79 | 2% |
| 13 - 19 | | | 44 | 0% | 21 | 0% |
| 20 - 29 | 85 | 11% | 2,171 | 17% | 795 | 17% |
| 30 - 39 | 381 | 48% | 6,240 | 49% | 2,252 | 49% |
| 40 - 49 | 246 | 31% | 3,112 | 24% | 1,144 | 25% |
| Over 49 | 68 | 9% | 942 | 7% | 273 | 6% |

**Blanks indicate less than 5 cases reported.**

## UPDATE ON MONTHLY REPORTS:

* In keeping with current CDC guidelines, total numbers for the state no longer include cases that reside in a state other than Massachusetts at the time of diagnosis. **Monthly statistics now reflect Massachusetts residents only.**

** In accordance with CDC recommendations, cases originally from a country where the predominant mode of transmission is "heterosexual with unknown risk of partner" (Pattern II Country) have been reclassified. These cases have been recategorized from "heterosexual from a Pattern II Country" to "No Identified Risk" (NIR), as indicated in the above table. The heterosexual transmission category applies to individuals who were sexually active with someone known to be HIV-infected or at high risk of infection (e.g. an individual with injecting drug use). Other analyses may estimate a proportion of NIR cases as probable heterosexual transmission.

## HIV-1 GROUP O SURVEILLANCE

The HIV/AIDS Surveillance Branch of the Centers for Disease Control (CDC) recently expanded HIV/AIDS surveillance to include enhanced surveillance for divergent strains of HIV, including HIV-1 group O. This strain has been detected among people who were born in the western and central African countries of Gabon, Togo, Senegal, Nigeria, Niger and Cameroon. Between 200 and 300 cases of HIV-1 group O infection have been identified worldwide, including two in the United States. In 1996, this variant of HIV was detected in an infection of an African woman living in California and in 1997, it was detected in a person living in Maryland. Both individuals are believed to have been infected in Africa.

As a result of the California case, the CDC has requested that blood from AIDS cases in the US, in persons from these African countries be sent to the CDC for potential detection of HIV-1 group O[1]. In addition, they are requesting that the state health departments interview these cases, with an emphasis on travel history, country where risk behavior occurred, country of birth for sexual partners in the US, and potential risks in Africa, such as procedures used for ritual or medicinal purposes. The Maryland case was detected as a result of this enhanced surveillance system.

Clinicians should be aware that the antibody response elicited by Group O strains is not consistently detected by enzyme immunoassay (EIA) kits commercially available[2]. However, the CDC has emphasized that the blood supply in the US continues to be exceptionally safe, with the risk of HIV infection reduced to one in five hundred thousand to one in one million units. Additionally, they recommend that patients who present with clinical or laboratory findings suggestive of HIV disease, but for whom HIV screening tests are negative or equivocal, should be evaluated with further diagnostic tests to rule out HIV infection[3]. If this circumstance should arise, consultation with the HIV Laboratory of the State Laboratory Institute can be obtained at (617) 983-6365.

It should be noted that all the strains of HIV are transmitted in the same manner. Clinicians who have in their care an HIV-1 infected patient from one of these African countries should contact the AIDS Surveillance Program at (617) 983-6560 for directions on how to collect and ship the specimen.


1. CDC. Identification of HIV-1 Group O Infection - Los Angeles County, California, 1996. MMWR 1996; Vol. 45 No. 26.
2. Loussert-Ajaka I, Ly TD, Chaix ML, et al. HIV-1/HIV-2 Seronegativity in HIV-1 subtype O infected patients. Lancet 1994;343:1393-4..
3. Schable C, Zekeng L, Pau CP, et al. Sensitivity of United States HIV antibody tests for detection of HIV-1 group O infections. Lancet 1994;344:1333-4.

## MEASURING VIRAL LOAD

There have been many advances in the understanding of how HIV reproduces in infected individuals and what the quantity of virus in the body means. Contrary to what was generally thought several years ago, HIV is never truly dormant. The virus reproduces (replicates) continuously once infection is established.

The amount of virus is directly related to the intensity of infection and correlates with the progression of disease in terms of loss of T-helper (CD4+) lymphocytes and the occurrence of AIDS-defining infections or cancers. One way to measure the amount of virus is to measure the virus circulating in the blood. The more virus in the blood, the more virus is reproducing in the body, the more intense the infection. Thus, measure of the "viral load" has become a way of assessing the intensity of HIV infection and predicting the likelihood of severe immune system damage.

The measurement of viral load is also a powerful way to assess the effectiveness of new medications and combinations of medications, and monitor use. Effective drugs, used alone, in the treatment of HIV infection reduce viral load around 3- to 10-fold. Combinations of drugs reduce viral load even further. Since HIV develops resistance to these drugs in direct proportion to the extent the virus reproduces in the presence of the drugs, the suppression of viral load to absolute minimum (and ideally none, if possible) has become the goal of treatment, i.e., "undetectable" viral load.

Viral load is determined not by measuring the actual virus, but by measuring the amount of viral RNA circulating in the blood. RNA is the genetic code of the virus that contains the information for viral reproduction. More viral RNA is produced than whole virus and some of the RNA is defective and cannot direct viral reproduction, but all viral RNA is related to the amount of viral reproduction. Viral load determinations frequently are reported in "copies", copies of the viral RNA molecule.

Viral load is measured by three types of laboratory tests - the PCR test (RT-PCR, Roche), the branched chain DNA test (bDNA, Chiron) and the nucleic acid sequence-based amplification (NASBA, Organon Technica). These tests are not interchangeable and measure RNA copies in different ways. The same test should be used to follow viral load levels over time in individual patients. Blood should be drawn for testing and handled in a consistent way. Currently, these tests can measure viral load down to 400 to 500 copies. They are being refined to measure below these levels.

Viral load varies from day to day and for a variety of reasons (illness, immunization, etc.), so one viral load determination is difficult to interpret. Usually, changes of three-fold or greater are significant. An initial viral load is usually followed-up with another determination in two to four weeks to establish a baseline.

Initiation of treatment with highly active antiretroviral therapy is usually followed-up with viral load determination in several weeks, although it may take longer to reach undetectable levels of virus in some patients. The goal of therapy is to maintain undetectable viral load, thus laboratory monitoring is done to monitor response to treatment.

The National Institutes of Health (NIH) will soon publish Public Health Service guidelines for the medical management of HIV infection. These will provide guidance on the use of viral load deter-minations, as well as on maximally effective therapy. (Drafts of principles and guidelines are available at http://www.cdcnac.org)

**Further information:**


Caliendo AM. Laboratory methods for quantitating HIV RNA. **AIDS Clin Care** 1995; 7: 89-96.

Mellors JW, *et al.* Prognosis in HIV-1 infection predicted by the quantity of virus in plasma. **Science** 1996; 272: 1167-1170.

Carpenter CCJ, *et al.* Antiretroviral therapy for HIV infection in 1997: updated recommendations of the International AIDS Society - USA Panel. **Jama** 1997; 277: 1962-1969.

Saag MS. Use of HIV viral load in clinical practice: back to the future. **Ann Intern Med** 1997; 126: 983-985. (also see related articles in the same issue)


*To Our Readers: Beginning with this issue, the Massachusetts AIDS Surveillance Program (MASP) and the AIDS Bureau will publish an expanded AIDS Quarterly Review, in order to provide you with a more extensive quantitative analysis of the AIDS epidemic in Massachusetts. This month's section, "A Guide to AIDS Surveillance in Massachusetts", explores some primary concepts. Future issues will review specific epidemiological topics.*

## WHAT IS AIDS SURVEILLANCE?

According to the Centers for Disease Prevention and Control (CDC, epidemiologic surveillance is:

> "the ongoing systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know. The final link in the surveillance chain is the application of these data to prevention and control. A surveillance system includes a functional capacity for data collection, analysis, and dissemination linked to public health programs."

In other words, by collecting and evaluating data pertaining to a particular disease, surveillance systems serve to describe disease occurrence and distribution.

In 1983 the Code of Massachusetts Regulations (105 CMR 300000 et seq) was amended to require that AIDS cases be reported to the Department of Public Health. In order to be classified as an AIDS case, a person must meet the CDC definition of AIDS.

**The CDC AIDS Case Definition = HIV infection and**

**diagnosis with one or more of the following "AIDS indicator" conditions:**

| | |
|---|---|
| Candidiasis (specific sites) | Lymphoma (Burkitt's, Immunoblastic, brain) |
| Cervical Carcinoma | Mycobacterium (avium or kansasii) |
| Coccidioidomycosis | Mycobacterium tuberculosis |
| Cryptococcosis | (pulmonary, disseminated, extra) |
| Cryptosporidiosis | Mycobacterium (other species) |
| Cytomegalovirus disease | Pneumocystis carinii pneumonia |
| Cytomegalovirus retinitis | Pneumonia (recurrent) |
| HIV encephalopathy | Prog. multifocal leukoencephathy |
| Herpes simplex | Salmonella septicemia |
| Histoplasmosis | Toxoplasmosis of brain |
| Isosporiasis | Wasting syndrome |
| Kaposi's sarcoma | |

**or**

**CD4 T-lymphocyte count of less than 200 cells/ul or less than 13% of total lymphocyte count**

Only people with AIDS, as defined by the CDC, are reportable in Massachusetts. HIV infection without AIDS is not a reportable condition. Consequently, the number of people who meet the AIDS case definition should not be used as the sole indicator of the impact of HIV infection since it provides a "lagging indicator" of the patterns of HIV transmission.

## WHO REPORTS AIDS CASES AND HOW?

Massachusetts General Law, chapter111, section 7 mandates that health care providers report all CDC-defined AIDS cases to the Massachusetts Department of Public Health, AIDS Surveillance Program. Massachusetts AIDS cases are reported through either routine or active surveillance.

**Reported Massachusetts AIDS Cases (12,703)** = **Routine:** Health Care Poviders report AIDS case directly at the time of diagnosis **(10,836 or 85%)** + **Active:** Case is located by MASP staff through the use of case finding methods (e.g. Death Certificate, Hospital Discharge Database reviews) **(1,867 or 15%)**

## WHAT DATA IS COLLECTED AND HOW IT IS STORED?

- ◊ People are included in the AIDS database if they are residents of Massachusetts at the time of their AIDS diagnosis. This means that people initially diagnosed in another state are not included among Massachusetts cases, even if they now live here.
- ◊ Information collected on AIDS cases includes patient demographics (age, gender, race/ethnicity, country of origin), the city/town of patient's residence and facility of AIDS diagnosis, the reporting source, the patient's risk for HIV infection, patient HIV and CD4 T-lymphocyte laboratory data and occurrence of opportunistic infections.
- ◊ The information is stored in a locked and restricted access area , in a secured building, and in a stand-alone computer.
- ◊ One of the most important aspects of maintaining the AIDS case registry is confidentiality. In accordance with Massachusetts law, the Massachusetts AIDS Surveillance Program ensures that AIDS case information is strictly confidential and exempt from inspection and release.

## DIAGNOSED VS. REPORTED AIDS CASES, WHAT'S THE DIFFERENCE?

Every year, the AIDS Surveillance Program receives case reports from health care providers—the number of case reports received in a year constitutes the "reported" cases. Once the year is over, the number of cases **reported** for that year does not increase. On the other hand, every year a certain number of people are **diagnosed** with AIDS—these are the diagnosed, or incident, cases for the year.

Ideally, all AIDS cases should be reported at the time of diagnosis. However, a time lag may occur between the time of diagnosis and time of report. Therefore, the number of cases diagnosed in a given year continues to increase even after the year has ended, since previously unreported cases continue to be identified and reported. This means that the most recent year's diagnosed cases will not be complete until reporting is complete. In Massachusetts, 65 percent of AIDS cases are reported within six months of diagnosis and 85 to 90 percent of AIDS cases will be reported within a year. This proportion represents a completeness of reporting well above that of most other communicable diseases.

## RESOURCES

***A Message to Health Care Providers***

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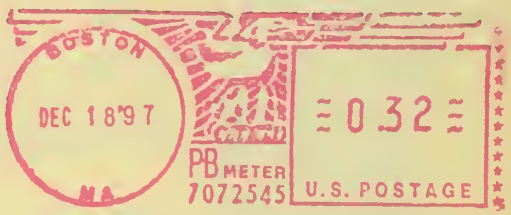


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Massachusetts

# HIV/AIDS Quarterly Review

*A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program Winter, 1997*

## Out-of-Treatment Injection Drug Users

### Results of the MPPG 1996-1997 IDU Profile Project

*As reported in the last AIDS Quarterly Review, the Massachusetts HIV Prevention Planning Group (MPPG) embarked on a project to better understand the HIV prevention needs of out-of-treatment injection drug users (IDUs) in Massachusetts. The group looked at data already collected (needle exchange, counseling and testing, outreach, AIDS case data and substance abuse intakes) and collected additional data through interviews and surveys with active IDUs. The project focused primarily on IDUs in the eleven cities with the most AIDS cases due to injection drug use (Boston, Brockton, Cambridge, Fall River, Fitchburg, Lawrence, Lowell, Lynn, New Bedford, Springfield and Worcester.)*

*Interviews and surveys were done in May, June and July of 1996 and analyzed through December of 1996. The following is adapted from the statewide summary and includes an excerpt of the study's major findings:*

**Inside.....**

Updated recommendations for management of occupational exposure to HIV .....pg. 2
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*Needle exchange was requested in every city by a number of participants.* There is extensive needle sharing across the state. In MDPH Counseling and Testing (C&T) data, sharing is reported in the past 30 days in every city by 19% of participants, on average. In cities where IDUs were surveyed, the average was 45%. Racial, ethnic and gender differences were noted in sharing practices in several cities from both surveys and C&T data. Statewide quantitative survey data found African Americans had the lowest rates of sharing (36.7%), followed by whites (38.7%), with Latinos reporting the highest rates (52.9%). In New Bedford, women were more likely to share than men (80% vs 56%), and this same pattern emerged less dramatically in Springfield (40% vs 37%). In Fitchburg and Worcester, women were less likely to share than men (33% vs 49%).

*IDUs adopt informal rules for sharing needles within their networks.* Many HIV-positive IDUs report only sharing with other HIV-positive people. Some IDUs report sharing discriminately, only with people who they believe are not positive. The most often reported needle-sharing category was "friends" (74.3%), with sexual partners the second most often reported (50%), followed by "friends of friends" (27.4%). Interestingly, family members came in fifth with 20%.

*Many respondents, in virtually all cities, reported growing up in close proximity to drug and/or alcohol abuse in both their home and family and their community.* In seven of the nine cities with qualitative survey data, respondents reported a history of familial addiction and drug abuse.

*The availability and use of bleach to clean needles is uneven.* Availability of bleach in shooting galleries is reported in five of the nine cities with qualitative interviews. Only 50% of the quantitative survey respondents had received bleach from an outreach worker in the past year. Consistent use of bleach ranges from 13% to 68%, which is reaffirmed in the C&T data (range 10-28%). Bleach use did not vary widely between men and women except in New Bedford, where only 15% of women who shared used bleach (vs 50% of men).

*Mental health and transitional programs were often requested to support people in becoming drug-free.* Respondents report difficulty in staying off injecting drugs, particularly without support or when returning to communities in which they previously used. In every city, at least 74% had been in drug treatment, pointing to the recidivism among IDUs (range 74% in Worcester to 90% in Lynn). Some IDUs report having "gotten clean" while incarcerated, but relapsed upon release. The lack of available work in an environment free from drug use is reported as a barrier to getting and staying clean, indicating a need for job training and placement.

*For additional information on this or other MPPG materials, or to join the MPPG mailing list, please contact Jim Matarazzo at The Medical Foundation (617) 451-0049.*

# UPDATED RECOMMENDATIONS FOR MANAGEMENT OF OCCUPATIONAL EXPOSURE TO HIV

The federal Centers for Disease Control and Prevention (CDC) provide guidelines for infection control. In 1990, CDC published a Public Health Service statement on the management of occupational exposure to HIV (MMWR, 1990; 39 [no. RR-1]). This statement covered a number of issues, including zidovudine (2DV, AZT, Retrovir®) postexposure use. At the time, little information was available in regard to efficacy of postexposure prophylaxis.

Last year, CDC updated the 1990 guidelines with provisional Public Health Service recommendations (MMWR, 1996; 45: 468-472) suggesting a new approach to postexposure prophylaxis. These new recommendations were based on indications of prevention or amelioration of infection in studies on experimental animals; the 67% reduction in perinatal transmission of HIV infection observed in the study of the use of zidovudine in pregnancy, and during and after birth (ACTG 076); the fact that perinatal zidovudine has an effect on transmission independent of quantity of circulating virus in the mother; and, a case-control study performed by CDC.

The CDC case-control study (MMWR 1995; 44: 929-933) involved comparison of health care workers who developed HIV infection after percutaneous exposure (blood, contaminated needlestick or other sharp injury related to a patient with HIV infection) with health care workers with similar exposure not resulting in infection. This study indicated risk factors associated with the likelihood of infection (see Table 1). Among the factors studied was zidovudine administration. Individuals who received zidovudine after exposure had a decrease of approximately 79% in the risk of HIV seroconversion.

TABLE 1: Risk factors associated with HIV infection in health care workers after percutaneous exposure (needlestick or other "sharp" injury) to HIV-infected blood. All of the adjusted odds ratios (degree of association) were significant ($p < 0.01$).

| RISK FACTOR | ADJUSTED ODDS RATIO | 95% CONFIDENCE INTERVAL |
|---|---|---|
| Deep injury | 16.1 | 6.1 - 44.6 |
| Visible blood on device | 5.2 | 1.8 - 17.7 |
| Involved needle placed in vein or artery | 5.1 | 1.9 - 14.8 |
| Terminal illness in source patient | 6.4 | 2.2 - 18.9 |
| Postexposure zidovudine | 0.2 | 0.1 - 0.6 |

Since 1990, a number of antiretroviral agents in addition to zidovudine have become available, including other reverse transcriptase inhibitors (didanosine, zalcitabine, stavudine, lamivudine) and protease inhibitors (saquinavir, ritonavir, indinavir). New agents, in combination, tend to be more active against HIV, reducing the quantity of virus circulating in the blood of people with HIV infection to very low, often undetectable levels. In particular, studies of zidovudine (ZDV) and lamivudine (3TC, Epivir®) and these two drugs with a protease inhibitor, such as indinavir (IDV, Crixivan®), in HIV-infected individuals have demonstrated very potent antiviral activity.

While new antiretroviral combinations are potent, they are not without the potential for significant recognized and, as yet, unrecognized adverse effects. Their use must be considered in the context of a well-established average risk of HIV infection from percutaneous exposure to HIV-infected blood of 0.3% or approximately one in three hundred. It is important that postexposure counseling is done by practitioners armed with pertinent information. The full CDC recommendation should be reviewed (see reference below).

# AIDS SURVEILLANCE SUMMARY

| | MA Cases Diagnosed in '95* | | Massachusetts Cumulative | | Alive in State | |
|---|---|---|---|---|---|---|
| Total cases reported as of 03/1/97 | **1,098** | | **12,194** | | **4,412** | |
| | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **Transmission Mode (Adults)** | **1,084** | | **12,000** | | **4,332** | |
| Male Sex w/Male | 313 | 29% | 5,060 | 42% | 1,388 | 32% |
| Injecting Drug Use | 435 | 40% | 4,019 | 33% | 1,667 | 38% |
| Male/Male Sex & IDU | 34 | 3% | 469 | 4% | 140 | 3% |
| Receipt of blood products | 18 | 2% | 324 | 3% | 95 | 2% |
| Heterosexual | 145 | 13% | 1,003 | 8% | 493 | 11% |
| Undetermined (NIR) | 139 | 13% | 1,125 | 9% | 549 | 13% |
| **Transmission Mode (Pediatric)** | **14** | | **194** | | **80** | |
| Mother w/AIDS/HIV | 12 | 86% | 169 | 87% | 73 | 91% |
| Receipt of blood/products | | | 23 | 12% | 6 | 8% |
| Other/undetermined | | | | | | |
| **Gender** | | | | | | |
| Male | 815 | 74% | 9,944 | 82% | 3,356 | 76% |
| Female | 283 | 26% | 2,250 | 18% | 1,056 | 24% |
| **Race/Ethnicity** | | | | | | |
| White | 578 | 53% | 7,216 | 59% | 2,238 | 51% |
| Black | 247 | 22% | 2,747 | 23% | 1,107 | 25% |
| Hispanic | 262 | 24% | 2,136 | 18% | 1,029 | 23% |
| Other/Unknown | 11 | 1% | 95 | 1% | 38 | 1% |
| **Age Group (years)** | | | | | | |
| Under 13 | 12 | 1% | 185 | 2% | 74 | 2% |
| 13 - 19 | | | 41 | 0% | 18 | 0% |
| 20 - 29 | 154 | 14% | 2,111 | 17% | 787 | 18% |
| 30 - 39 | 557 | 51% | 6,011 | 49% | 2,195 | 50% |
| 40 - 49 | 290 | 26% | 2,948 | 24% | 1,083 | 25% |
| Over 49 | 81 | 7% | 898 | 7% | 255 | 6% |

**Blanks indicate less than 5 cases reported.**

## UPDATE ON MONTHLY REPORTS:

* In keeping with current CDC guidelines, total numbers for the state no longer include cases that reside in a state other than Massachusetts at the time of diagnosis. **Monthly statistics will now reflect Massachusetts residents only.**

* In accordance with CDC recommendations, cases originally from a country where the predominant mode of transmission is "heterosexual with unknown risk of partner" (Pattern II Country) have been reclassified. These cases have been recategorized from "heterosexual from a Pattern II Country" into the mode of "No Identified Risk" (NIR). Therefore, you will notice that the numbers within this category have shifted from heterosexual transmission (Pattern II Country) to NIR or "Undetermined". Other analyses may estimate the proportion of these (NIR) cases that are due to heterosexual transmission.

The new CDC recommendations consider the nature of potential HIV exposure and possible adverse effects of the antiretroviral agents that may be used for prophylaxis. The guidelines recognize that postexposure prophylaxis should be "recommended" or "offered" to workers (always with adequate counseling) depending on the nature of exposure. ZDV is always used, since this is the drug for which data are available. Postexposure prophylaxis should be started as early as possible, within 1 to 2 hours after exposure (on the basis of experimental studies), but an outer limit of effect in humans has not been established. CDC recommends 4 weeks of treatment. Adequate follow-up counseling and medical evaluation, with periodic counseling and HIV testing for at least 6 months, and careful screening for adverse effects of treatment are suggested. Longer periods of follow-up may be appropriate to deal with worker or practitioner concerns.

The CDC/Public Health Service recommendations for postexposure prophylaxis are summarized in Table 1.

TABLE 2: Drug and dose recommendations for postexposure chemoprophylaxis - Public Health Service, provisional, 1996 (see MMWR 1996; 45: 468-472).

**Prophylaxis is recommended for 4 weeks**

| DRUG | DOSE | FREQUENCY |
|---|---|---|
| Zidovudine (**ZDV**, AZT, Retrovir®) | 200 mg | three times a day |
| Lamivudine (**3TC**, Epivir®) | 150 mg | two times a day |
| Indinavir (**IDV**, Crixivan®) | 800 mg | three times a day |

Intolerance and toxicity may be a problem with all of these agents. For full prescribing information, see package inserts. Expert assistance may be necessary.

This review of the CDC recommendations is meant to direct practitioners' attention to recent developments. **If HIV drug resistance is a consideration in the source patient, or if recommended drugs are contraindicated or poorly tolerated, or if there is any uncertainty; expert consultation is urged.** Practitioners and other parties who provide postexposure counseling/care or are interested should review pertinent information, including the formal report of the recommendations:

**Update: Provisional Public Health Service Recommendations for Chemoprophylaxis After Occupational Exposure to HIV.**
***Morbidity and Mortality Weekly Report*** . June 7,1996, Vol. 45, No. 22, Pp. 468-72

**More Information or Assistance:**
Free copies of the CDC recommendations are available until June 7, 1997:
CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003
Telephone: (800) 458-5231 or (301) 217-0023
CDC home page: http://www.cdc.gov
CDC fax information service: (404) 332-4565 (Hospital Infections Program directory)
HIV/AIDS Treatment Information Service: (800) 448-0440
Anonymous registry of postexposure prophylaxis (Glaxo Wellcome and Merck) to assess toxicity: (888) 737-4448 [888-PEP-4HIV].
Unusual or severe toxicity: FDA (800) 332-1088.

TABLE 1: Simplified algorithm of provisional Public Health Service recommendations for chemoprophylaxis after occupational exposure to HIV - 1996. Reference should be made to the complete recommendations for full information (see MMWR 1996; 45: 468-472).

| TYPE OF EXPOSURE | SOURCE MATERIAL | RECOMMEND VS. OFFER | TREATMENT∞ ZDV | TREATMENT∞ 3TC | TREATMENT∞ IDV |
|---|---|---|---|---|---|
| PERCUTANEOUS EXPOSURE: NEEDLESTICK or "SHARP" | BLOOD | RECOMMEND | + | + | + |
| | | LARGE VOLUME † Φ AND HIGH TITER OF HIV †† | | | |
| | | RECOMMEND | + | + | +/- |
| | | LARGE VOLUME † OR HIGH TITER OF HIV †† | | | |
| | | OFFER | + | + | NO |
| | | NEITHER LARGE VOLUME † NOR HIGH TITER†† | | | |
| | OTHER POTENTIALLY INFECTIOUS MATERIAL* | OFFER | + | + | NO |
| | OTHER BODY FLUIDS** | NOT OFFER | | | |
| OTHER EXPOSURE: MUCOUS MEMBRANE | BLOOD | OFFER | + | + | +/- |
| | OTHER POTENTIALLY INFECTIOUS MATERIAL* | OFFER | + | +/- | NO |
| | OTHER BODY FLUID** | NOT OFFER | | | |
| SKIN | BLOOD | OFFER | + | + | +/- |
| | OTHER POTENTIALLY INFECTIOUS MATERIAL* | OFFER | + | +/- | NO |
| | OTHER BODY FLUID** | NOT OFFER | | | |

* Any fluid with visible blood. Semen; vaginal secretions; and cerebrospinal, synovial, pleural, peritoneal, pericardial and amniotic fluids. Tissue.
** Urine, saliva, stool, sweat, etc.; without visible blood.
† Hollow needle containing blood, deep injury, etc.
†† Acute retroviral illness, end-stage AIDS; viral titers not yet studied in this regard, but may be helpful.
Φ Any exposure to concentrated HIV (research lab., production facility)
∞ See Table 2: Dose recommendations.
**ZDV** = zidovudine **3TC** = lamivudine **IDV** = indinavir

# RESOURCES

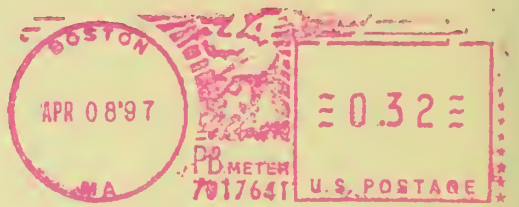
***A Message to Health Care Providers***

AIDS is designated as a reportable condition under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

If you have resources (not calendar items) to announce, please call (617) 983-6570. For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.

Massachusetts Department of Public Health
305 South Street
Jamaica Plain, MA 02130-3597



MASS. HS 30.21: 998/SPRING

# Massachusetts HIV/AIDS Quarterly Review

GOVERNMENT DOCUMENTS COLLECTION
JUL 14 1998
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*A newslettter of the HIV/AIDS Bureau and AIDS Surveillance Program Spring, 1998*

## New Director Chosen for AIDS Bureau

We extend our warmest welcome to Jean Flatley McGuire, PhD who was named Director of the HIV/AIDS Bureau at the end of April. Dr. McGuire has been associated with the Bureau in consulting capacities since 1991.

A graduate of Brandeis University's Heller Graduate School of Social Welfare, Dr. McGuirc also has a Masters in Public Health from Harvard University. Before moving to pursue graduate studies, McGuire was the executive director of the AIDS Action Council in Washington, DC. AIDS Action has been the leading national AIDS Policy organization since its founding in 1983. During her tenure, the Ryan White Care Act and the Americans with Disabilities Act were both pressed into law.

McGuire has a twenty year history in public health including program administration work in the fields of developmental disabilities, substance abuse, geriatrics, and broader long term care. Her doctoral research focused on ethical concerns in the conduct of HIV research. Dr. McGuire brings to her new role extensive experience in HIV and othcr public health arenas and a desire to continue the participatory program and policy planning approaches that have made Massachusetts unique.

## Progress Before and After New Therapy

There has been good news recently. The incidence of AIDS cases and deaths from AIDS have dropped significantly in Massachusetts and in the United States in the last two to three years. Progress seems to be directly related to the introduction of combination antiretroviral treatment regimens. The full impact of the newer treatments will take time to assess, since the most recent recommendation for "triple" therapy are barely a year old.

On the basis of data now available, marked improvement in survival with AIDS began even before the newer antiretroviral agents were generally available. A recent analysis of survival with AIDS in Massachusetts over the years 1979 through 1994 updates earlier studies. Median survival with AIDS (the length of time 50% of persons with AIDS survived after AIDS diagnosis) increased from

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13.5 months among cases diagnosed in 1979 through 1988 to 23 months for cases diagnosed from 1979 through 1994. Individuals diagnosed with AIDS in 1992-1994 survived twice as long as persons diagnosed in 1979-83.

Persons meeting the AIDS case definition prior to its development were added to the core data when recognized. The survival curve (proportion surviving over time) for AIDS is shown in Figure 1.

Median survival by year of diagnosis is presented in Figure 2. A progressive improvement in survival is apparent and highly significant ($p = 0.0001$). The apparent drop in survival in 1994 is mostly due to incomplete information. Some of the apparent improvement in survival after 1991 is due to the change in the AIDS case definition (introduction of CD4+ T-lymphocyte count of less than 200 per $mm^3$ as an AIDS-defining condition), but this diagnosis at an earlier stage of infection accounts for only about 10% of the change. The proportion of persons with AIDS who died within one month of their diagnosis dropped from 14.8% in 1979-83 to 3.3% in 1992-94, while three-year and five-year survival increased almost three-fold. Lengthened survival was almost certainly related to improvements in acute and primary medical care that occurred even before the introduction of protease inhibitors and combination therapy.

In a univariate analysis, longer survival was associated with being a woman, a minority and not being a man who had sex with a man. However, this was related entirely to when in the time course of the epidemic one was likely to have been diagnosed and these associations were not maintained in a multivariate model that included control for year of diagnosis. In other words, when year of diagnosis was taken into consideration, men and women, members of all affected race/ethnicity groups and persons with all of the risk behaviors and exposures associated with HIV infection had similar survival estimates. Only older age, severity of illness and CD4+ cell count at AIDS diagnosis were associated with shortened survival time when other factors were controlled for in the multivariate model. However, as time went on the impact of severity of AIDS-defining disease and low CD4 count decreased.

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Figure 1

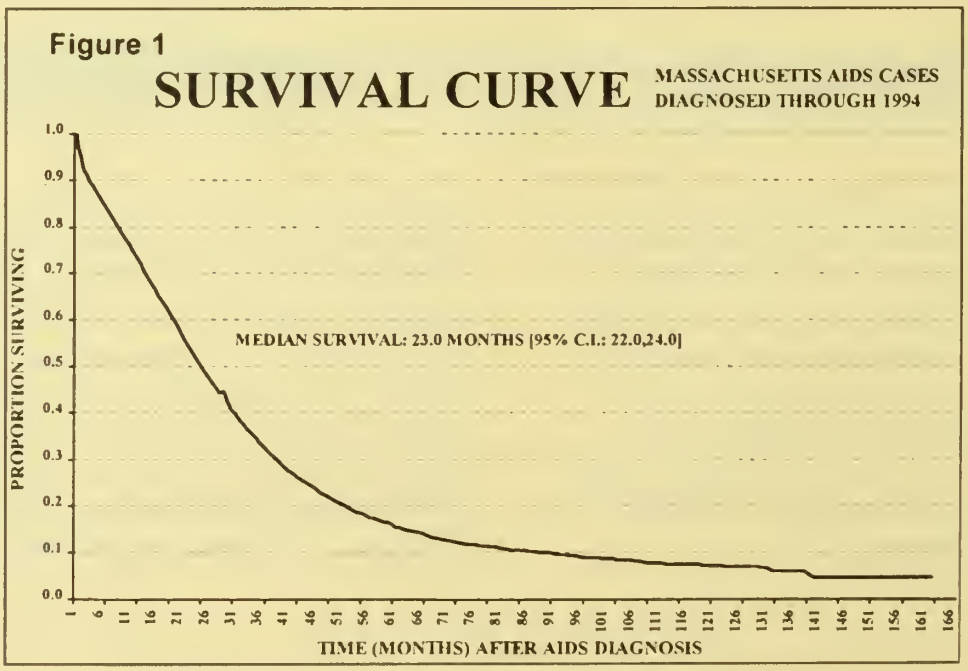

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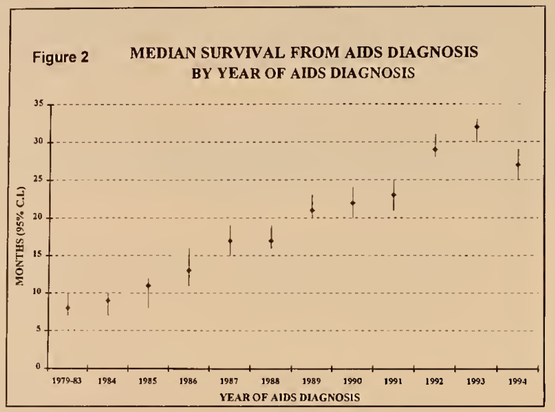
Figure 2 MEDIAN SURVIVAL FROM AIDS DIAGNOSIS BY YEAR OF AIDS DIAGNOSIS




The improvement in survival with AIDS in Massachusetts and the median survival in 1993-94 are very similar to that seen over the same time period in the CDC's multicenter Adult Spectrum of Disease Study. This CDC study follows patients cared for in HIV/AIDS specialty clinics. Thus, the trend in survival among all persons reported with AIDS in Massachusetts is similar to that of individuals receiving care in HIV/AIDS specialty clinics before and after AIDS diagnosis.

The survival study through 1994 provides a baseline against which we can measure further improvements with combination antiretroviral therapy. However, the primary impact of improved treatment of HIV infection is slowing or stopping the progression to an AIDS diagnosis.

Thus, survival from an AIDS diagnosis may become a less relevant measure of the impact of HIV infection. This may be the best measure of progress.



# Completeness of AIDS Case Reporting

One of the most important aspects of any surveillance system is the completeness of reporting. Information collected by the Massachusetts AIDS Surveillance Program is used to describe trends in the epidemic, make projections, target prevention efforts, plan for health service needs and to allocate government funding for HIV/AIDS related activities. The possible effects of undercount or bias could be the loss of federal funding and inadequacies in prevention and service planning. AIDS case reporting completeness in the state was assessed by identifying unreported AIDS cases in other data sets. The 1994 Massachusetts Uniform Hospital Discharge Data Set (UHDDS) and Medicaid claims data set were used to evaluate the state AIDS registry.

Acute care hospitals in Massachusetts (except for state and federal facilities) submit demographic, clinical, and billing information on each hospital stay to the Massachusetts Division of Health Care and Policy. The discharge or case-mix data set is timely and statewide. Because it is a statewide data set, its use was important for the evaluation of AIDS case reporting. However, the UHDDS data would not allow us to asses completeness of reporting for people not hospitalized for an AIDS-related diagnosis. For this reason, the 1994 Medicaid claims data set was also used. Though not all AIDS patients receive Medicaid, this data set does cover people with AIDS who may have been seen as outpatients only.

The state AIDS registry was matched to the 1994 UHDDS data for all inpatient discharges with an International Classification of Disease Code indicative of AIDS. A similar match occurred between the AIDS registry and the 1994 Medicaid claims data set.

These matches were first done through the use of encrypted social security numbers to ensure confidentiality. For those with missing social security numbers or who did not match earlier, a second match was done using gender and date of birth. Unmatched records from the hospital discharge and Medicaid data sets were then reviewed to determine their AIDS case status. Two-source capture-recapture methods were used to calculate reporting completeness.1

Using the hospital discharge data set the AIDS registry was 93% complete (95% confidence interval (CI) = 92%-94%). Unreported cases were more likely to be female or have no specified risk for HIV infection and less likely to be reported as MSM cases. The Medicaid claims data set suggested that the AIDS registry was 94.5% complete (95% confidence interval = 93.7% - 95.3%). In addition, a sensitivity analysis of the Medicaid data set calculated the minimum completeness of the AIDS registry to be 90.8% (95% confidence interval = 89.8% - 91.8).

In conclusion, completeness of reporting of AIDS in Massachusetts is high, but there are differences by gender and mode of transmission of the virus. Ascertaining completeness of reporting is important on an ongoing basis for quality assurance of the surveillance database over time.

*1 Hook EB, Regal RR. Capture-recapture methods in epidemiology: methods and limitatious. Epidemiology Rev 1995;17:243-64.*



# AIDS SURVEILLANCE SUMMARY

**Total Cases Reported in May, 1998 : 108**

| | Boston | | Massachusetts | | Alive in State | |
|---|---|---|---|---|---|---|
| Total Cases reported as of 6/1/98 | 4,534 | | 13,204 | | 4,777 | |
| | No. | % | No. | % | No. | % |
| **RESIDENCE*** | 4,534 | | 13,204 | | | |
| City of Boston | 4,515 | 99% | 4,515 | 34% | 1,555 | 33% |
| Remainder of Boston SMSA** | N/A | | 3,393 | 26% | 1,166 | 24% |
| Remainder of Massachusetts | N/A | | 4,778 | 36% | 1,784 | 37% |
| Subtotal | 4,515 | 99% | 12,686 | 96% | 4,505 | 94% |
| Prisoners*** | 19 | 1% | 518 | 4% | 272 | 6% |
| **TRANSMISSION MODE (adults)** | 4,473 | | 12,998 | | 4,691 | |
| Male Sex w/Male | 2,266 | 51% | 5,360 | 41% | 1,490 | 32% |
| Injecting Drug User | 1,182 | 26% | 4,465 | 34% | 1,831 | 39% |
| Male/Male Sex & IDU | 167 | 4% | 506 | 4% | 149 | 3% |
| Receipt of blood/products | 64 | 1% | 331 | 3% | 95 | 2% |
| Heterosexual**** | 337 | 8% | 1,174 | 9% | 582 | 12% |
| Undetermined****/Other | 457 | 10% | 1,162 | 9% | 544 | 12% |
| **TRANSMISSION MODE (pediatric)** | 61 | | 206 | | 86 | |
| Mother w/AIDS/at risk for HIV | 53 | 87% | 179 | 87% | 77 | 90% |
| Receipt of blood/products | 6 | 10% | 25 | 12% | 8 | 9% |
| Undetermined**** | 2 | 3% | 2 | 1% | 1 | 1% |
| **GENDER** | 4,534 | | 13,204 | | 4,777 | |
| Male | 3,819 | 84% | 10,710 | 81% | 3,632 | 76% |
| Female | 715 | 16% | 2,494 | 19% | 1,145 | 24% |
| **RACE/ETHNICITY** | 4,534 | | 13,204 | | 4,777 | |
| White | 2,301 | 51% | 7,662 | 58% | 2,345 | 49% |
| Black | 1,669 | 37% | 3,048 | 23% | 1,229 | 26% |
| Hispanic | 528 | 12% | 2,393 | 18% | 1,163 | 24% |
| Other/Unknown | 36 | 1% | 101 | 1% | 40 | 1% |
| **AGE GROUP (years)** | 4,534 | | 13,204 | | 4,777 | |
| Under 13 | 58 | 1% | 195 | 1% | 78 | 2% |
| 13 - 19 | 8 | 0% | 49 | 0% | 26 | 1% |
| 20 - 29 | 756 | 17% | 2,226 | 17% | 819 | 17% |
| 30 - 39 | 2,270 | 50% | 6,487 | 49% | 2,350 | 49% |
| 40 - 49 | 1,101 | 24% | 3,258 | 25% | 1,211 | 25% |
| Over 49 | 341 | 8% | 989 | 7% | 293 | 6% |

* In the past, the AIDS Surveillance Program received case reports on some out-of-state residents diagnosed in MA. These cases were incorporated into our database and listed as out-of-state cases. As of 10/1/96, in keeping with current CDC guidelines, these cases will no longer be included in our database.

** Refers to the most recent Boston Standard Metropolitan Statistical Area;

*** Cases diagnosed while in prison.

**** Heterosexual cases formerly based on Pattern II criteria now classified as "Undetermined."

## MASSACHUSETTS AIDS CASES BY GENDER AND RACE/ETHNICITY

*Cumulative Cases Reported as of 6/1/98*

| MALES | WHITE No. | WHITE % | BLACK No. | BLACK % | HISPANIC No. | HISPANIC % | TOTAL* No. | TOTAL* % |
|---|---|---|---|---|---|---|---|---|
| **Male Sex w/Male** | 4,524 | 68% | 480 | 22% | 310 | 17% | 5,360 | 50% |
| **Injecting Drug User** | 1,197 | 18% | 919 | 43% | 1,134 | 64% | 3,271 | 31% |
| **Male/Male Sex & IDU** | 355 | 5% | 85 | 4% | 64 | 4% | 506 | 5% |
| **Receipt of blood/products** | 204 | 3% | 19 | 1% | 17 | 1% | 244 | 2% |
| **Heterosexual:** | | | | | | | | |
| Sex w/IDU | 52 | 1% | 50 | 2% | 28 | 2% | 130 | 1% |
| Sex w/recpt of bld/prdts. | 3 | 0% | 3 | 0% | 1 | 0% | 7 | 0% |
| Sex w/HIV/AIDS | 61 | 1% | 101 | 5% | 64 | 4% | 228 | 2% |
| **Undetermined:** | | | | | | | | |
| Presumed Hetero-Unk Risk of Prtnr | 160 | 2% | 341 | 16% | 98 | 5% | 607 | 6% |
| Other Undetermined** | 105 | 2% | 92 | 4% | 35 | 2% | 239 | 2% |
| **Pediatric** | 39 | 1% | 47 | 2% | 31 | 2% | 118 | 1% |
| Total Male (% of all cases)* | 6,700 | 63% | 2,138 | 20% | 1,782 | 17% | 10,710 | 100% |

| FEMALES | WHITE No. | WHITE % | BLACK No. | BLACK % | HISPANIC No. | HISPANIC % | TOTAL* No. | TOTAL* % |
|---|---|---|---|---|---|---|---|---|
| **Injecting Drug User** | 568 | 59% | 375 | 41% | 248 | 41% | 1,194 | 48% |
| **Receipt of blood/products** | 55 | 6% | 20 | 2% | 9 | 1% | 87 | 3% |
| **Heterosexual:** | | | | | | | | |
| Sex w/IDU | 134 | 14% | 119 | 13% | 190 | 31% | 444 | 18% |
| Sex w/Bi Male | 21 | 2% | 8 | 1% | 3 | 0% | 32 | 1% |
| Sex w/recpt of bld/prdts. | 17 | 2% | 4 | 0% | 2 | 0% | 23 | 1% |
| Sex w/HIV/AIDS | 76 | 8% | 145 | 16% | 88 | 14% | 310 | 12% |
| **Undetermined** | | | | | | | | |
| Presumed Hetero-Unk Risk of Prtnr | 52 | 5% | 175 | 19% | 27 | 4% | 256 | 10% |
| Other Undetermined** | 17 | 2% | 29 | 3% | 14 | 2% | 60 | 2% |
| **Pediatric** | 22 | 2% | 35 | 4% | 30 | 5% | 88 | 4% |
| Total Female (% of all cases) | 962 | 39% | 910 | 36% | 611 | 24% | 2,494 | 100% |

| TOTAL CASES | 7,662 | 3,048 | 2,393 | 13,204 |
|---|---|---|---|---|

*Total includes other and unknown races and those with confirmed occupational exposures.

**Includes: those w/ other undetermined risks, those who refused follow-up interview, those who have died with no determined risk, & those who have been lost to follow-up.



## TRENDS IN MASSACHUSETTS AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 6/1/98*

| Transmission Mode | <= 1988 | | 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 1417 | 60% | 507 | 51% | 473 | 45% | 541 | 41% | 642 | 37% | 613 | 36% | 433 | 31% | 354 | 30% | 238 | 28% | 5360 | 41% |
| IDU* | 446 | 19% | 271 | 27% | 328 | 31% | 479 | 36% | 672 | 39% | 675 | 39% | 546 | 39% | 487 | 41% | 350 | 40% | 4465 | 34% |
| MSM & IDU | 109 | 5% | 48 | 5% | 42 | 4% | 58 | 4% | 63 | 4% | 68 | 4% | 49 | 4% | 43 | 4% | 13 | 2% | 506 | 4% |
| Rec. of blood/prod. | 100 | 4% | 37 | 4% | 26 | 2% | 35 | 3% | 59 | 3% | 30 | 2% | 13 | 1% | 12 | 1% | 14 | 2% | 331 | 3% |
| Heterosexual | | | | | | | | | | | | | | | | | | | | |
| Sex w/IDU | 57 | 2% | 31 | 3% | 49 | 5% | 50 | 4% | 74 | 4% | 83 | 5% | 89 | 6% | 64 | 5% | 49 | 6% | 574 | 4% |
| Sex w/Bi Male | 4 | 0% | 2 | 0% | 4 | 0% | 4 | 0% | 4 | 0% | 5 | 0% | 7 | 1% | 2 | 0% | 0 | 0% | 32 | 0% |
| Sex w/bld/prdt recip. | 0 | 0% | 4 | 0% | 2 | 0% | 3 | 0% | 3 | 0% | 5 | 0% | 3 | 0% | 2 | 0% | 5 | 1% | 30 | 0% |
| Sex w/HIV/AIDS | 20 | 1% | 12 | 1% | 17 | 2% | 32 | 2% | 64 | 2% | 75 | 4% | 94 | 7% | 89 | 7% | 70 | 8% | 538 | 4% |
| Undetermined/Other | | | | | | | | | | | | | | | | | | | | |
| Presumed Hetero-Unk risk of partner | 130 | 5% | 51 | 5% | 65 | 6% | 76 | 6% | 91 | 5% | 105 | 6% | 100 | 7% | 90 | 8% | 80 | 9% | 863 | 7% |
| Other Undeter/Other* | 33 | 1% | 21 | 2% | 21 | 2% | 21 | 2% | 23 | 1% | 39 | 2% | 38 | 3% | 34 | 3% | 30 | 3% | 299 | 2% |
| Pediatric | 52 | 2% | 12 | 1% | 31 | 3% | 21 | 2% | 20 | 1% | 21 | 1% | 15 | 1% | 16 | 1% | 16 | 2% | 206 | 2% |
| TOTAL (% of total) | 2368 | (18%) | 996 | (8%) | 1058 | (8%) | 1320 | (10%) | 1715 | (13%) | 1719 | (13%) | 1387 | (11%) | 1193 | (9%) | 865 | (7%) | 13204 | (100%) |

## TRENDS IN BOSTON AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 6/1/98*

| Transmission Mode | <= 1988 | | 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 669 | 62% | 228 | 59% | 202 | 55% | 238 | 53% | 278 | 48% | 221 | 42% | 178 | 43% | 124 | 39% | 88 | 35% | 2266 | 50% |
| IDU* | 194 | 18% | 82 | 21% | 78 | 21% | 122 | 27% | 190 | 33% | 170 | 33% | 113 | 27% | 94 | 30% | 85 | 33% | 1182 | 26% |
| MSM & IDU | 46 | 4% | 14 | 4% | 13 | 4% | 22 | 5% | 20 | 3% | 17 | 3% | 15 | 4% | 16 | 5% | 4 | 2% | 167 | 4% |
| Rec. of blood/prod. | 14 | 1% | 10 | 3% | 9 | 2% | 8 | 2% | 8 | 1% | 5 | 1% | 1 | 0% | 4 | 1% | 4 | 2% | 64 | 1% |
| Heterosexual: | | | | | | | | | | | | | | | | | | | | |
| Sex w/IDU | 23 | 2% | 10 | 3% | 12 | 3% | 11 | 2% | 12 | 2% | 24 | 5% | 24 | 6% | 16 | 5% | 9 | 4% | 147 | 3% |
| Sex w/Bi Male | 1 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 2 | 0% | 0 | 0% | 0 | 0% | 4 | 0% |
| Sex w/bld/prdt recip. | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 4 | 0% |
| Sex w/HIV/AIDS | 11 | 1% | 3 | 1% | 3 | 1% | 8 | 2% | 24 | 4% | 21 | 4% | 30 | 7% | 25 | 8% | 25 | 10% | 182 | 4% |
| Undetermined/Other: | | | | | | | | | | | | | | | | | | | | |
| Presumed Hetero-Un risk of partner | 77 | 7% | 26 | 7% | 33 | 9% | 30 | 7% | 35 | 6% | 42 | 8% | 32 | 8% | 26 | 8% | 26 | 10% | 350 | 8% |
| Other Undeter/Other | 15 | 1% | 11 | 3% | 11 | 3% | 5 | 1% | 8 | 1% | 14 | 3% | 13 | 3% | 8 | 3% | 8 | 3% | 107 | 2% |
| Pediatric | 21 | 2% | 4 | | 6 | 1% | 8 | 2% | 4 | 1% | 5 | 1% | 5 | 1% | 3 | 1% | 5 | 2% | 61 | 1% |
| TOTAL (% of total) | 1071 | (24%) | 388 | (9%) | 367 | (8%) | 453 | (10%) | 580 | (13%) | 521 | (11%) | 413 | (9%) | 316 | (7%) | 255 | (6%) | 4534 | (100%) |

*Injecting Drug User

**Includes: those w/other undetermined risks, those who refused follow-up interview, those have died with no determined risk, those who have been lost to follow-up, & those with a confirmed occupational risk.

***Row totals include cases diagnosed in 1997.

**NOTE: Blank cells indicate <5 cases reported in category.**

# RESOURCES

***A Message to Health Care Providers***

AIDS is designated as a reportable condition under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.

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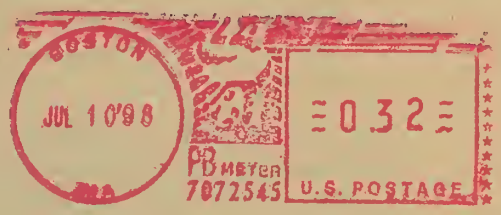
Massachusetts Department of Public Health
305 South Street
Jamaica Plain, MA 02130-3597

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# Massachusetts HIV/AIDS Quartley Review

1998

University of Massachusetts Depository Copy

*A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program Summer, 1998*

## Income, Insuranceand Housing Among AIDS Patients

The Massachusetts AIDS Surveillance Program received a grant from the U.S. Centers for Disease Control and Prevention in 1994 to pilot an alternative AIDS surveillance method. Part of the alternative system included collecting information useful in planning HIV services and prevention activities through a one-time in-person interview.

Interview data included sociodemographic information, behavioral information, access to medical and social services, as well as disability level.

Only persons with AIDS were interviewed. A random sample of AIDS cases reported from participating Massachusetts health care facilities was selected for interviews. The participating sites were referral and community-based health care facilities located in all regions of the state and provided care to a diverse group of patients. The study sites reported cases which were similar to the overall population of AIDS cases in Massachusetts with regard to gender, race, age, transmission risk, and AIDS - defining condition.

One third of the men and all women reported from study sites were asked to participate in interviews. Informal consent was obtained. A total of 308 people were eligible to participate. Interviews were conducted in English and Spanish.

Of the sampled cases alive at the time of report and medically able to participate (n=249), 95 people participated in the interview, yielding a response rate of 38%. There were no statistically significant differences between responders and non-responders by race/ethnicity, sex, or mode of transmission of the virus.

This report will focus on participants' income sources, insurance status, and housing issues.

### Sources of Income

There was a statistically significant difference between the proportion of female respondents receiving public assistance compared with male respondents (see figure 1). There were no significant differences between the proportion of respondents receiving public assistance by self-identified race or ethnicity.

The majority of interview respondents (66%) received most of their income from Social Security, while 17% received salary or wages.

## Use of Public Assistance by Sex

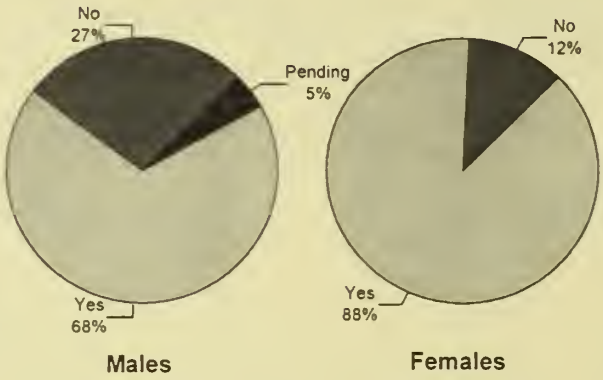


FIGURE 1.

### Health Insurance

Eighty-seven percent of the respondents had health insurance coverage at the time of the interview. The proportion of uninsured in a similar study in 11 states and cities was 25%.[1] Seventy percent of the respondents with insurance had Medicaid, 12% had private insurance, 11% had Medicare, 5% participated in other state programs (ACT-NOW, HDRP, etc.) (See table 1).

There were no statistically significant differences in health insurance status by sex, self-identified race, ethnicity, language spoken during interview, educational level, sexual orientation, or employment status. This is most likely due to the fact that many respondents receive Medicaid or other state or federal programs. Women were twice as likely as men to be receiving Medicaid (see table 1).

1 Diaz T, Chu SY, Conti L, et al. Health Insurance Coverage among persons with AIDS: results from a multistate surveillance project. Am J Public Health 1994; 84(6):1015-1018.

**TABLE 1. Health Insurance Type by Sex**

| | Male | Female | Total |
|---|---|---|---|
| Medicaid | 43% | 91% | 70% |
| Medicare | 22% | 2% | 11% |
| Private (employer pays premium) | 19% | 7% | 12% |
| State Program (Act Now, etc.) | 8% | 0% | 4% |
| Private (self-paid premium) | 3% | 0% | 1% |
| Veteran's Affairs | 3% | 0% | 1% |
| Unknown | 3% | 0% | 1% |
| Total | 100% | 100% | 100% |

### Living Situation, Housing, and Homelessness

Respondents were asked about their living situation before they learned of their HIV infection. There were statistically significant differences by sex ($p=0.02$). Female respondents were much less likely to live alone, and over twice as likely to live with family members (in the "living with others" category) than male respondents. There were no statistically significant differences between the proportion of respondents living alone vs. living with

others by race ethnicity before being diagnosed with HIV. However, Latinos were twice as likely to live with family members within the "living with others" category than were non-Hispanics.

Respondents were asked whether or not their living situation changed after they were diagnosed with HIV. Fifty-five percent of respondents said that their living situation did change after they received a positive HIV test. There were no significant differences in the likelihood of changing living situation after receiving a positive HIV test by sex. Women were still more likely to live with others than men were after receiving a positive HIV test. However, there is a striking increase in the number of women living alone after their HIV diagnosis. (See Table 2.)

TABLE 2

**Living Situation Before HIV Diagnosis**

| | Male | Female | Total |
|---|---|---|---|
| Living Alone | 21% | 4% | 11% |
| Living with Others (partner, friends, family) | 61% | 86% | 75% |
| Other (shelter, correctional instit., dorm) | 18% | 10% | 14% |
| Total | 100% | 100% | 100% |

**Current Living Situation**

| | Male | Female | Total |
|---|---|---|---|
| Living Alone | 26% | 24% | 25% |
| Living with Others (partner, friends, family) | 52% | 59% | 56% |
| Other (shelter, correctional instit., dorm) | 22% | 7% | 13% |
| Medical Care Facility* | 0% | 10% | 6% |
| Total | 100% | 100% | 100% |

*Medical Care Facility =hospital, hospice, or nursing home with no other residence

AIDS was the major cause of death for homeless men and women in Boston between 1988 to 1993.[2] In our study, 36% of respondents had been homeless at some point in their life. Though the difference in proportions of men and women having a history of homelessness is not statistically significant (p=0.09), the number of women with a history of homelessness is greater (44% in women vs. 27% in men). Homelessness and unstable housing have been found to be barriers to discharge and associated with increased lengths of hospital stays for people with HIV/AIDS after controlling for morbidity.[3]

2 Hwang SW, Orav EJ, O'Connell JJ, Lebow JM, Brennan TA. Causes of death in homeless adults in Boston. Ann Intern Med 1997; 126(8):625-628.

3 Bonuck KA, Arno PS. Social and medical factors affecting hospital discharge of persons with HIV/AIDS. J Community Health 1997; 22(4):225-232.

## ANNOUNCEMENT OF A PUBLIC HEARING

There will be a public hearing on regulations implementing non-name HIV reporting on September 22, 1998 from 3:00pm to 5:00pm in the Public Health Council Room of the Department of Public Health, 250 Washington Street in downtown Boston. Written comments to Jean Flatley McGuire at the AIDS Bureau will be received until 5pm on September 29, 1998.

## MASSACHUSETTS RESIDENT AIDS CASES & RATES BY COUNTY

*Totals as of AUGUST 1, 1998**

| County | MA Cases No. | % | Cumulative Cases per 100,000** | Alive Cases No. | % |
|---|---|---|---|---|---|
| Barnstable | 490 | 3.8% | 262.6 | 164 | 3.5% |
| Berkshire | 81 | 0.6% | 58.1 | 22 | 0.5% |
| Bristol | 842 | 6.5% | 166.3 | 338 | 7.2% |
| Essex | 1,021 | 7.9% | 152.4 | 407 | 8.7% |
| Franklin | 43 | 0.3% | 61.3 | 15 | 0.3% |
| Hampden | 1,253 | 9.7% | 274.6 | 497 | 10.6% |
| Hampshire | 131 | 1.0% | 89.4 | 46 | 1.0% |
| Islands | 36 | 0.3% | 204.0 | 10 | 0.2% |
| Middlesex | 1,961 | 15.2% | 140.2 | 699 | 14.9% |
| Norfolk | 650 | 5.0% | 105.5 | 209 | 4.5% |
| Plymouth | 516 | 4.0% | 118.5 | 174 | 3.7% |
| Suffolk | 4,856 | 37.7% | 731.4 | 1,708 | 36.5% |
| Worcester | 1,013 | 7.9% | 142.7 | 396 | 8.5% |
| TOTAL | 12,893 | 100% | 214.3 | 4,685 | 100% |

* Persons diagnosed while in MA prisons are not included.
** Based on 1990 Census

## MASSACHUSETTS AIDS CASES BY GENDER AND RACE/ETHNICITY

*Cumulative Cases Reported as of 8/1/98*

| MALES | WHITE No. | % | BLACK No. | % | HISPANIC No. | % | TOTAL* No. | % |
|---|---|---|---|---|---|---|---|---|
| **Male Sex w/Male** | 4,581 | 67% | 486 | 22% | 315 | 17% | 5,429 | 50% |
| **Injecting Drug User** | 1,228 | 18% | 933 | 43% | 1,157 | 64% | 3,337 | 31% |
| **Male/Male Sex & IDU** | 359 | 5% | 87 | 4% | 64 | 4% | 512 | 5% |
| **Receipt of blood/products** | 204 | 3% | 19 | 1% | 17 | 1% | 244 | 2% |
| **Heterosexual:** | 119 | 2% | 157 | 6% | 95 | 5% | 373 | 3% |
| Sex w/IDU | 53 | 1% | 52 | 2% | 29 | 2% | 134 | 1% |
| Sex w/recpt of bld/prdts. | 3 | 0% | 3 | 0% | 1 | 0% | 7 | 0% |
| Sex w/HIV/AIDS | 63 | 1% | 102 | 5% | 65 | 4% | 232 | 2% |
| **Undetermined:** | 269 | 3% | 436 | 15% | 140 | 7% | 860 | 8% |
| Presumed Hetero-Unk Risk of Prtnr | 166 | 2% | 343 | 16% | 103 | 6% | 622 | 6% |
| Other Undetermined** | 103 | 2% | 93 | 4% | 37 | 2% | 238 | 2% |
| **Pediatric** | 40 | 1% | 47 | 2% | 31 | 2% | 119 | 1% |
| Total Male (% of all cases)* | 6,800 | 63% | 2,165 | 20% | 1,819 | 17% | 10,874 | 100% |

| FEMALES | WHITE No. | % | BLACK No. | % | HISPANIC No. | % | TOTAL* No. | % |
|---|---|---|---|---|---|---|---|---|
| **Injecting Drug User** | 585 | 59% | 381 | 41% | 249 | 40% | 1,219 | 48% |
| **Receipt of blood/products** | 56 | 6% | 20 | 2% | 9 | 1% | 88 | 3% |
| **Heterosexual:** | 252 | 26% | 287 | 30% | 289 | 46% | 830 | 33% |
| Sex w/IDU | 136 | 14% | 122 | 13% | 194 | 31% | 453 | 18% |
| Sex w/Bi Male | 22 | 2% | 8 | 1% | 3 | 0% | 33 | 1% |
| Sex w/recpt of bld/prdts. | 17 | 2% | 4 | 0% | 2 | 0% | 23 | 1% |
| Sex w/HIV/AIDS | 77 | 8% | 153 | 16% | 90 | 15% | 321 | 13% |
| **Undetermined** | 71 | 7% | 209 | 22% | 43 | 7% | 325 | 12% |
| Presumed Hetero-Unk Risk of Prtnr | 54 | 5% | 179 | 19% | 30 | 5% | 265 | 10% |
| Other Undetermined** | 17 | 2% | 30 | 3% | 13 | 2% | 60 | 2% |
| **Pediatric** | 23 | 2% | 36 | 4% | 30 | 5% | 89 | 3% |
| Total Female (% of all cases) | 987 | 39% | 933 | 37% | 620 | 24% | 2,551 | 100% |

| TOTAL CASES | 7,787 | 3,098 | 2,439 | 13,425 |
|---|---|---|---|---|

*Total includes other and unknown races and those with confirmed occupational exposures.
**Includes: those w/ other undetermined risks, those who refused follow-up interview, those who have died with no determined risk, & those who have been lost to follow-up.

## TRENDS IN MASSACHUSETTS AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 8/1/98*

| Transmission Mode | < = 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male (MSM | 1925 | 57% | 474 | 45% | 541 | 41% | 643 | 37% | 616 | 36% | 435 | 31% | 363 | 30% | 247 | 28% | 136 | 26% | 5429 | 40% |
| Inj. Drug User (IDU) | 718 | 21% | 328 | 31% | 480 | 36% | 672 | 39% | 678 | 39% | 552 | 40% | 499 | 41% | 364 | 41% | 197 | 37% | 4556 | 34% |
| MSM & IDU | 157 | 5% | 42 | 4% | 58 | 4% | 63 | 4% | 68 | 4% | 50 | 4% | 44 | 4% | 16 | 2% | 12 | 2% | 512 | 4% |
| Rec. of blood/prod. | 137 | 4% | 26 | 2% | 35 | 3% | 59 | 3% | 30 | 2% | 13 | 1% | 12 | 1% | 14 | 2% | 3 | 1% | 332 | 2% |
| Heterosexual | 130 | 4% | 72 | 7% | 90 | 6% | 146 | 8% | 168 | 9% | 193 | 14% | 159 | 12% | 132 | 15% | 86 | 16% | 1203 | 8% |
| Sex w/IDU | 88 | 3% | 49 | 5% | 50 | 4% | 74 | 4% | 83 | 5% | 89 | 6% | 65 | 5% | 54 | 6% | 26 | 5% | 587 | 4% |
| Sex w/Bi Male | 6 | 0% | 4 | 0% | 4 | 0% | 4 | 0% | 5 | 0% | 7 | 1% | 2 | 0% | 0 | 0% | 1 | 0% | 33 | 0% |
| Sex w/bld/prdt recip. | 4 | 0% | 2 | 0% | 3 | 0% | 3 | 0% | 5 | 0% | 3 | 0% | 2 | 0% | 5 | 1% | 2 | 0% | 30 | 0% |
| Sex w/HIV/AIDS | 32 | 1% | 17 | 2% | 33 | 2% | 65 | 4% | 75 | 4% | 94 | 7% | 90 | 7% | 73 | 8% | 57 | 11% | 553 | 4% |
| Undetermined/Other | 235 | 7% | 86 | 8% | 97 | 8% | 112 | 6% | 144 | 8% | 139 | 10% | 126 | 11% | 107 | 12% | 92 | 17% | 1185 | 9% |
| Presumed Hetero-Unk risk of partner | 181 | 5% | 65 | 6% | 76 | 6% | 90 | 5% | 105 | 6% | 100 | 7% | 92 | 8% | 82 | 9% | 65 | 12% | 887 | 7% |
| Other Undeter/Other* | 54 | 2% | 21 | 2% | 21 | 2% | 22 | 1% | 39 | 2% | 39 | 3% | 34 | 3% | 25 | 3% | 27 | 5% | 298 | 2% |
| Pediatric | 64 | 2% | 31 | 3% | 21 | 2% | 20 | 1% | 21 | 1% | 15 | 1% | 16 | 1% | 16 | 2% | 3 | 1% | 208 | 2% |
| TOTAL (% of total) | 3366 | (25%) | 1059 | (8%) | 1322 | (10%) | 1715 | (13%) | 1725 | (13%) | 1397 | (10%) | 1219 | (9%) | 896 | (7%) | 529 | (4%) | 13425 | (100%) |

*Includes:those with other undetermined risks, those who refused follow-up interview, those have died with no determined risk, those lost to follow-up, and those w/confirmed occupational risk.

**Row totals include cases diagnosed in 1998.

## TRENDS IN BOSTON AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 8/1/98*

| Transmission Mode | < = 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male (MSM | 897 | 61% | 202 | 55% | 238 | 53% | 279 | 48% | 223 | 42% | 180 | 43% | 128 | 39% | 91 | 34% | 39 | 26% | 2295 | 50% |
| Inj. Drug User (IDU) | 277 | 19% | 78 | 21% | 122 | 27% | 190 | 33% | 172 | 33% | 114 | 27% | 98 | 30% | 88 | 33% | 48 | 32% | 1206 | 26% |
| MSM & IDU | 60 | 4% | 13 | 4% | 22 | 5% | 20 | 3% | 17 | 3% | 15 | 4% | 16 | 5% | 6 | 2% | 0 | 0% | 169 | 4% |
| Rec. of blood/prod. | 24 | 2% | 9 | 2% | 8 | 2% | 8 | 1% | 5 | 1% | 1 | 0% | 4 | 1% | 4 | 2% | 1 | 1% | 64 | 1% |
| Heterosexual | 48 | 3% | 15 | 4% | 20 | 4% | 38 | 6% | 47 | 9% | 56 | 13% | 42 | 13% | 38 | 14% | 35 | 24% | 348 | 7% |
| Sex w/IDU | 33 | 2% | 12 | 3% | 11 | 2% | 12 | 2% | 24 | 5% | 24 | 6% | 16 | 5% | 10 | 4% | 4 | 3% | 149 | 3% |
| Sex w/Bi Male | 1 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 2 | 0% | 0 | 0% | 0 | 0% | 1 | 1% | 5 | 0% |
| Sex w/bld/prdt recip. | 0 | 0% | 0 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 0 | 0% | 4 | 0% |
| Sex w/HIV/AIDS | 14 | 1% | 3 | 1% | 8 | 2% | 25 | 4% | 21 | 4% | 30 | 7% | 26 | 8% | 27 | 10% | 30 | 20% | 190 | 4% |
| Undetermined/Other | 129 | 9% | 44 | 12% | 35 | 8% | 41 | 7% | 56 | 11% | 46 | 11% | 36 | 11% | 34 | 13% | 28 | 19% | 460 | 10% |
| Presumed Hetero-Unk risk of partner | 103 | 7% | 33 | 9% | 30 | 7% | 34 | 6% | 42 | 8% | 32 | 8% | 28 | 9% | 28 | 11% | 18 | 12% | 355 | 8% |
| Other Undeter/Other* | 26 | 2% | 11 | 3% | 5 | 1% | 7 | 1% | 14 | 3% | 14 | 3% | 8 | 2% | 6 | 2% | 10 | 7% | 105 | 2% |
| Pediatric | 25 | 2% | 6 | 2% | 8 | 2% | 4 | 1% | 5 | 1% | 5 | 1% | 3 | 1% | 5 | 2% | 0 | 0% | 61 | 1% |
| TOTAL (% of total) | 1460 | (32%) | 367 | (8%) | 453 | (10%) | 580 | (13%) | 525 | (11%) | 417 | (9%) | 327 | (7%) | 266 | (6%) | 151 | (3%) | 4603 | (100%) |

# AIDS SURVEILLANCE SUMMARY

**Total Cases Reported in July, 1998 : 86**

| Total Cases reported as of 8/1/98 | Boston No. | % | Massachusetts No. | % | Alive in State No. | % |
|---|---|---|---|---|---|---|
| | 4,603 | | 13,425 | | 4,970 | |
| **RESIDENCE*** | 4,603 | | 13,425 | | | |
| City of Boston | 4,584 | 99% | 4,584 | 34% | 1,613 | 32% |
| Remainder of Boston SMSA** | N/A | | 3,458 | 26% | 1,223 | 25% |
| Remainder of Massachusetts | N/A | | 4,851 | 36% | 1,849 | 37% |
| Subtotal | 4,584 | 99% | 12,893 | 96% | 4,685 | 94% |
| Prisoners*** | 19 | 1% | 532 | 4% | 285 | 6% |
| **TRANSMISSION MODE (adults)** | 4,542 | | 13,217 | | 4,883 | |
| Male Sex w/Male | 2,295 | 51% | 5,429 | 41% | 1,549 | 32% |
| Injecting Drug User | 1,206 | 27% | 4,556 | 34% | 1,911 | 39% |
| Male/Male Sex & IDU | 169 | 4% | 512 | 4% | 154 | 3% |
| Receipt of blood/products | 64 | 1% | 332 | 3% | 96 | 2% |
| Heterosexual**** | 348 | 8% | 1,203 | 9% | 609 | 12% |
| Undetermined****/Other | 460 | 10% | 1,185 | 9% | 564 | 12% |
| **TRANSMISSION MODE (pediatric)** | 61 | | 208 | | 87 | |
| Mother w/AIDS/at risk for HIV | 53 | 87% | 180 | 87% | 77 | 89% |
| Receipt of blood/products | 6 | 10% | 25 | 12% | 8 | 9% |
| Undetermined**** | 2 | 3% | 3 | 1% | 2 | 3% |
| **GENDER** | 4,603 | | 13,425 | | 4,970 | |
| Male | 3,871 | 84% | 10,874 | 81% | 3,775 | 76% |
| Female | 732 | 16% | 2,551 | 19% | 1,195 | 24% |
| **RACE/ETHNICITY** | 4,603 | | 13,425 | | 4,970 | |
| White | 2,331 | 51% | 7,787 | 58% | 2,447 | 49% |
| Black | 1,697 | 37% | 3,098 | 23% | 1,270 | 26% |
| Hispanic | 536 | 12% | 2,439 | 18% | 1,207 | 24% |
| Other/Unknown | 39 | 1% | 101 | 1% | 46 | 1% |
| **AGE GROUP (years)** | 4,603 | | 13,425 | | 4,970 | |
| Under 13 | 58 | 1% | 195 | 1% | 78 | 2% |
| 13 - 19 | 8 | 0% | 51 | 0% | 27 | 1% |
| 20 - 29 | 771 | 17% | 2,262 | 17% | 852 | 17% |
| 30 - 39 | 2,300 | 50% | 6,583 | 49% | 2,437 | 49% |
| 40 - 49 | 1,120 | 24% | 3,328 | 25% | 1,273 | 26% |
| Over 49 | 346 | 8% | 1,006 | 7% | 303 | 6% |

* In the past, the AIDS Surveillance Program received case reports on some out-of-state residents diagnosed in MA. These cases were incorporated into our database and listed as out-of-state cases. As of 10/1/96, in keeping with current CDC guidelines, these cases will no longer be included in our database.

** Refers to the most recent Boston Standard Metropolitan Statistical Area;

*** Cases diagnosed while in prison.

**** Heterosexual cases formerly based on Pattern II criteria now classified as "Undetermined."

## RESOURCES

### *A Message to Health Care Providers*

AIDS is designated as a reportable condition by under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.

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# Massachusetts HIV/AIDS Quarterly Review

*A newslettter of the HIV/AIDS Bureau and AIDS Surveillance Program Fall, 1998*

## HIV Surveillance in Massachusetts

In January 1999, the Massachusetts Department of Public Health will implement HIV surveillance across the state using a non-name based system. AIDS has been reportable directly to the Massachusetts Department of Public Health since 1983. AIDS cases are reportable in every state in the United States and form the basis for national surveillance. Recent advances in the treatment of HIV infection have been so successful that people with HIV are living longer and fewer are progressing to an AIDS diagnosis. As evidence of this change, the number of new AIDS cases in Massachusetts dropped 60% between 1995 and 1997 and continues to drop. These factors initially led Massachusetts to investigate the implementation of an HIV Surveillance system.

Approximately 30 other states are currently conducting HIV surveillance, almost all of them reporting HIV infection cases by name to the state. Maryland is the exception and reports HIV infection using a unique identifier code. Massachusetts joins Maryland by implementing a non-name based system and Hawaii and Illinois have also recently decided to pursue non-name based systems of HIV surveillance.

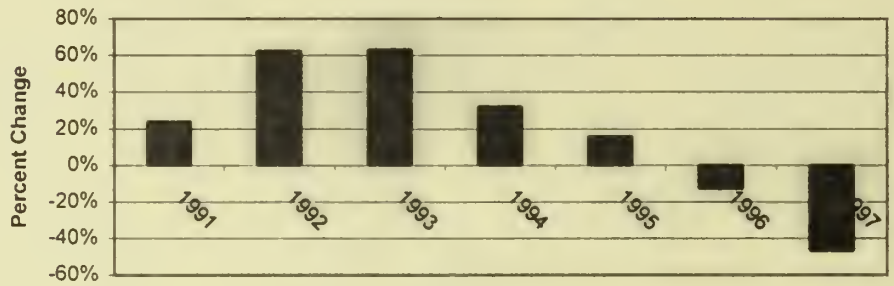
The process of developing this system of HIV surveillance in Massachusetts has been open and community based. MDPH's HIV/AIDS Bureau initially brought the question of HIV Surveillance to two advisory groups, the Massachusetts HIV Prevention Planning Group (MPPG) and the Statewide Consumer Advisory Board (SWCAB). These two groups were asked to discuss the issue of HIV surveillance and the method by which it was to be done. Both groups voted in favor of HIV surveillance using a non-name based system. An HIV surveillance fact-finding group of consumers, providers, DPH staff, and members of the MPPG and SWCAB was also assembled by MDPH to investigate HIV surveillance in other states. This group visited both Maryland which uses a unique identifier code to report HIV infection, and New Jersey which reports by name. Regional meetings were also held around the state to gather input on HIV Surveillance from all interested parties, especially providers and HIV-positive consumers.

In March 1998, the development of a non-name based system was endorsed by the Commissioner of Public Health, Dr. Howard Koh. An HIV Surveillance Implementation Team--made up of HIV positive consumers, members of the MPPG, the SWCAB, the HIV Surveillance Task Force, and representatives from the Massachusetts Medical Society and other organizations, MPDH's AIDS Bureau

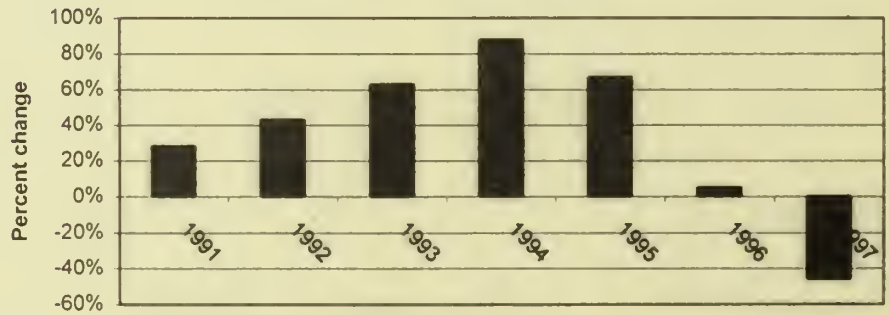
and AIDS Surveillance Program, was appointed by the Commissioner to assist in the design of the surveillance system. Regulations were promulgated to permit HIV infection reporting and a hearing was held where public comment was received by the department. In October, the Public Health Council approved final regulatory changes, allowing the department to move forward with HIV surveillance. The Implementation Team continues to assist the department in the development of policy and procedures to help put into operation the reporting regulations.

HIV surveillance in Massachusetts will begin January 1, 1999. Training regarding HIV surveillance will begin in November 1998, and continue throughout the year. Technical assistance and support will be available through the AIDS Bureau and the HIV/AIDS surveillance Program. A formative evaluation process will be initiated in January 1999 and will continue through a two-year period, with interim reports generated in June 1999, December 1999, June 2000, and December 2000. For more information regarding HIV surveillance, please call the HIV/AIDS Surveillance Program at (617) 983-6560.

**Percent Change in AIDS cases since 1990**




**Percent Change in Deaths in AIDS Cases since 1990**



## MASSACHUSETTS AIDS CASES BY GENDER AND RACE/ETHNICITY

*Cumulative Cases Reported as of 11/1/98*

| MALES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MODE OF TRANSMISSION | WHITE | | BLACK | | HISPANIC | | TOTAL* | |
| | No. | % | No. | % | No. | % | No. | % |
| Male Sex w/Male | 4,608 | 84% | 491 | 9% | 325 | 6% | 5,473 | 100% |
| Injecting Drug User (IDU) | 1,251 | 37% | 952 | 28% | 1,189 | 35% | 3,410 | 100% |
| Male/Male Sex & IDU | 361 | 69% | 90 | 17% | 68 | 13% | 522 | 100% |
| Receipt of blood/products | 203 | 84% | 18 | 7% | 17 | 7% | 242 | 100% |
| **Heterosexual:** | **124** | 32% | **160** | 41% | **100** | 26% | **387** | 100% |
| Sex w/IDU | 56 | 41% | 52 | 38% | 29 | 21% | 137 | 100% |
| Sex w/recpt of bld/prdts. | 3 | 43% | 3 | 43% | 1 | 14% | 7 | 100% |
| Sex w/HIV/AIDS | 65 | 27% | 105 | 43% | 70 | 29% | 243 | 100% |
| **Undetermined:** | **274** | 31% | **456** | 51% | **142** | 16% | **888** | 100% |
| Presumed Hetero-Unk Risk of Prtnr | 172 | 27% | 356 | 55% | 108 | 17% | 646 | 100% |
| Other Undetermined** | 102 | 42% | 100 | 41% | 34 | 14% | 242 | 100% |
| **Pediatric** | **39** | 33% | **48** | 40% | **31** | 26% | **119** | 100% |
| **Total Male (% of all cases)*** | **6,860** | 62% | **2,215** | 20% | **1,872** | 17% | **11,041** | 100% |

| FEMALES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MODE OF TRANSMISSION | WHITE | | BLACK | | HISPANIC | | TOTAL* | |
| | No. | % | No. | % | No. | % | No. | % |
| Injecting Drug User (IDU) | 601 | 48% | 391 | 31% | 257 | 21% | 1,253 | 100% |
| Receipt of blood/products | 56 | 63% | 20 | 22% | 10 | 11% | 89 | 100% |
| **Heterosexual:** | **260** | 31% | **292** | 35% | **291** | 34% | **845** | 100% |
| Sex w/IDU | 141 | 31% | 125 | 27% | 194 | 42% | 461 | 100% |
| Sex w/Bi Male | 22 | 67% | 8 | 24% | 3 | 9% | 33 | 100% |
| Sex w/recpt of bld/prdts. | 17 | 74% | 4 | 17% | 2 | 9% | 23 | 100% |
| Sex w/HIV/AIDS | 80 | 24% | 155 | 47% | 92 | 28% | 328 | 100% |
| **Undetermined** | **72** | 21% | **220** | 65% | **45** | 13% | **339** | 100% |
| Presumed Hetero-Unk Risk of Prtnr | 56 | 20% | 191 | 68% | 33 | 12% | 282 | 100% |
| Other Undetermined** | 16 | 28% | 29 | 51% | 12 | 21% | 57 | 100% |
| **Pediatric** | **23** | 26% | **36** | 40% | **30** | 34% | **89** | 100% |
| **Total Female (% of all cases)** | **1,012** | 39% | **959** | 37% | **633** | 24% | **2,615** | 100% |

| | | | | |
|---|---|---|---|---|
| **TOTAL CASES** | **7,872** | **3,174** | **2,505** | **13,656** |

*Total includes other and unknown races and those with confirmed occupational exposures.

**Includes: those w/ other undetermined risks, those who refused follow-up interview, those who have died with no determined risk, & those who have been lost to follow-up.

# Frequently Asked Questions About HIV Surveillance

**Why report HIV?**

AIDS has been reportable to MDPH since 1983. Recent advances in the treatment of HIV infection have meant that fewer people are progressing to an AIDS diagnosis. Counting AIDS cases alone no longer provides an accurate picture of the extent of the HIV epidemic. In order to accurately target resources and programs it is important to monitor trends in HIV infection.

**How will HIV be reported?**

HIV will be reported to MDPH using a non-name based system. A non-name based system means that no names of those who test positive for HIV will be given to the state. Instead, pieces of personal information, such as gender and date of birth, will be given. Using a non-name based system will protect confidentiality.

**Is AIDS still reportable?**

Yes. All diagnosed cases of AIDS will still be reportable, by name, as currently required. This will enable MDPH to continue monitoring trends in the development of AIDS statewide.

**When will HIV Surveillance begin in Massachusetts?**

HIV Surveillance will begin on January 1st, 1999 using a non-name based system of reporting.

**How will the reported information be used?**

Information from disease reporting is used to guide prevention, treatment, and service programs. Specifically, HIV surveillance data will be used to: track the scope and trends in the HIV epidemic in Massachusetts, target and evaluate HIV prevention efforts, and estimate needs for treatment, health care and other support services.

**Will only new cases of HIV be reported?**

No, both newly diagnosed cases of HIV and people that are HIV positive and currently in care will be reported.

**Will anonymous HIV testing still be available?**

Yes. Anonymous testing is an important part of the HIV prevention effort. Free, anonymous testing will continue to be available at sites throughout the state. The state will not require providers to report positive results when providing anonymous counseling and testing.

**Will training regarding HIV Surveillance be offered?**

Yes. Training regarding HIV surveillance will be offered through the Department of Public Health beginning in December and will take place throughout the state.

## MASSACHUSETTS RESIDENT AIDS CASES & RATES BY COUNTY

*Totals as of November 1, 1998**

| County | MA Cases No. | % | Cumulative Cases per 100,000** | Alive Cases No. | % |
|---|---|---|---|---|---|
| Barnstable | 492 | 3.8% | 263.7 | 164 | 3.4% |
| Berkshire | 82 | 0.6% | 58.8 | 22 | 0.5% |
| Bristol | 857 | 6.5% | 169.3 | 346 | 7.2% |
| Essex | 1,053 | 8.0% | 157.1 | 436 | 9.0% |
| Franklin | 43 | 0.3% | 61.3 | 15 | 0.3% |
| Hampden | 1,270 | 9.7% | 278.3 | 510 | 10.6% |
| Hampshire | 131 | 1.0% | 89.4 | 45 | 0.9% |
| Islands | 36 | 0.3% | 204.0 | 10 | 0.2% |
| Middlesex | 1,995 | 15.2% | 142.7 | 724 | 15.0% |
| Norfolk | 663 | 5.1% | 107.6 | 220 | 4.6% |
| Plymouth | 527 | 4.0% | 121.1 | 183 | 3.8% |
| Suffolk | 4,915 | 37.5% | 740.3 | 1,742 | 36.0% |
| Worcester | 1,037 | 7.9% | 146.1 | 416 | 8.6% |
| TOTAL | 13,101 | 100% | 217.8 | 4,833 | 100% |

* Persons diagnosed while in MA prisons are not included.
** Based on 1990 Census

## TRENDS IN MASSACHUSETTS AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 11/1/98*

| Transmission Mode | < = 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male (MS | 1925 | 57% | 475 | 45% | 542 | 41% | 645 | 38% | 615 | 36% | 436 | 31% | 364 | 30% | 252 | 27% | 151 | 26% | 5473 | 40% |
| Inj. Drug User (IDU) | 719 | 21% | 328 | 31% | 480 | 36% | 675 | 39% | 681 | 39% | 553 | 39% | 505 | 41% | 380 | 41% | 222 | 38% | 4663 | 34% |
| MSM & IDU | 157 | 5% | 42 | 4% | 58 | 4% | 63 | 4% | 71 | 4% | 52 | 4% | 45 | 4% | 17 | 2% | 13 | 2% | 522 | 4% |
| Rec. of blood/prod. | 136 | 4% | 26 | 2% | 35 | 3% | 59 | 3% | 31 | 2% | 11 | 1% | 12 | 1% | 13 | 1% | 4 | 1% | 331 | 2% |
| Heterosexual | 130 | 4% | 73 | 7% | 89 | 6% | 145 | 8% | 167 | 9% | 194 | 14% | 161 | 12% | 141 | 15% | 89 | 16% | 1232 | 8% |
| Sex w/IDU | 88 | 3% | 49 | 5% | 50 | 4% | 74 | 4% | 82 | 5% | 69 | 5% | 64 | 5% | 57 | 6% | 28 | 5% | 598 | 4% |
| Sex w/Bi. Male | 6 | 0% | 4 | 0% | 4 | 0% | 4 | 0% | 5 | 0% | 7 | 0% | 2 | 0% | 0 | 0% | 1 | 0% | 33 | 0% |
| Sex w/bld/prdt recip. | 4 | 0% | 2 | 0% | 3 | 0% | 3 | 0% | 5 | 0% | 3 | 0% | 2 | 0% | 5 | 1% | 2 | 0% | 30 | 0% |
| Sex w/HIV/AIDS | 32 | 1% | 18 | 2% | 32 | 2% | 64 | 4% | 75 | 4% | 95 | 7% | 93 | 8% | 79 | 8% | 58 | 10% | 571 | 4% |
| Undetermined/Other | 234 | 7% | 87 | 8% | 98 | 8% | 112 | 6% | 144 | 8% | 140 | 10% | 130 | 11% | 111 | 12% | 95 | 17% | 1228 | 9% |
| Presumed Hetero-Unk risk of partner | 180 | 5% | 66 | 6% | 77 | 6% | 91 | 5% | 106 | 6% | 101 | 7% | 95 | 8% | 87 | 9% | 72 | 12% | 928 | 7% |
| Other Undeter/Other* | 54 | 2% | 21 | 2% | 21 | 2% | 21 | 1% | 38 | 2% | 39 | 3% | 35 | 3% | 24 | 3% | 23 | 4% | 299 | 2% |
| Pediatric | 64 | 2% | 31 | 3% | 21 | 2% | 20 | 1% | 21 | 1% | 15 | 1% | 16 | 1% | 16 | 2% | 3 | 1% | 208 | 2% |
| TOTAL (% of total) | 3365 | (25%) | 1062 | (8%) | 1323 | (10%) | 1719 | (13%) | 1730 | (13%) | 1401 | (10%) | 1233 | (9%) | 930 | (7%) | 577 | (4%) | 13657 | (100%) |

*Includes:those with other undetermined risks, those who refused follow-up interview, those have died with no determined risk those lost to follow-up, and those w/confirmed occupational risk.

**Row totals include cases diagnosed in 1998.

## TRENDS IN BOSTON AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 11/1/98*

| Transmission Mode | < = 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male (MS | 897 | 62% | 202 | 55% | 239 | 53% | 280 | 48% | 224 | 43% | 180 | 43% | 129 | 39% | 89 | 34% | 46 | 29% | 2309 | 50% |
| Inj. Drug User (IDU) | 276 | 19% | 77 | 21% | 120 | 26% | 190 | 33% | 168 | 32% | 113 | 27% | 96 | 29% | 84 | 32% | 50 | 31% | 1206 | 26% |
| MSM & IDU | 59 | 4% | 13 | 4% | 22 | 5% | 19 | 3% | 17 | 3% | 16 | 4% | 17 | 5% | 6 | 2% | 0 | 0% | 169 | 4% |
| Rec. of blood/prod. | 24 | 2% | 9 | 2% | 8 | 2% | 8 | 1% | 5 | 1% | 1 | 0% | 4 | 1% | 3 | 1% | 1 | 1% | 63 | 1% |
| Heterosexual | 48 | 3% | 15 | 4% | 20 | 4% | 38 | 6% | 47 | 9% | 57 | 13% | 44 | 13% | 38 | 14% | 34 | 24% | 352 | 7% |
| Sex w/IDU | 33 | 2% | 12 | 3% | 11 | 2% | 12 | 2% | 24 | 5% | 24 | 6% | 16 | 5% | 9 | 3% | 4 | 3% | 148 | 3% |
| Sex w/Bi. Male | 1 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 2 | 0% | 0 | 0% | 0 | 0% | 1 | 1% | 5 | 0% |
| Sex w/bld/prdt recip. | 0 | 0% | 0 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 0 | 0% | 4 | 0% |
| Sex w/HIV/AIDS | 14 | 1% | 3 | 1% | 8 | 2% | 25 | 4% | 21 | 4% | 31 | 7% | 28 | 8% | 28 | 11% | 29 | 18% | 195 | 4% |
| Undetermined/Other | 128 | 9% | 44 | 12% | 36 | 8% | 41 | 7% | 56 | 11% | 44 | 11% | 37 | 11% | 37 | 13% | 29 | 19% | 477 | 10% |
| Presumed Hetero-Unk risk of partner | 102 | 7% | 33 | 9% | 31 | 7% | 34 | 6% | 42 | 8% | 31 | 7% | 29 | 9% | 30 | 11% | 19 | 12% | 369 | 8% |
| Other Undeter/Other* | 26 | 2% | 11 | 3% | 5 | 1% | 7 | 1% | 14 | 3% | 13 | 3% | 8 | 2% | 7 | 3% | 10 | 6% | 108 | 2% |
| Pediatric | 25 | 2% | 6 | 2% | 8 | 2% | 4 | 1% | 5 | 1% | 5 | 1% | 3 | 1% | 5 | 2% | 0 | 0% | 61 | 1% |
| TOTAL (% of total) | 1457 | (31%) | 366 | (8%) | 453 | (10%) | 580 | (13%) | 522 | (11%) | 416 | (9%) | 330 | (7%) | 262 | (6%) | 160 | (3%) | 4637 | (100%) |

*Includes:those with other undetermined risks, those who refused follow-up interview, those have died with no determined risk those lost to follow-up, and those w/confirmed occupational risk.

**Row totals include cases diagnosed in 1998.

# AIDS SURVEILLANCE SUMMARY

**Total Cases Reported in October, 1998 : 77**

| Total Cases reported as of 11/1/98 | Boston 4,656 No. | % | Massachusetts 13,656 No. | % | Alive in State 5,137 No. | % |
|---|---|---|---|---|---|---|
| **RESIDENCE*** | 4,656 | | 13,656 | | 5,137 | |
| City of Boston | 4,637 | 99% | 4,639 | 34% | 1,644 | 32% |
| Remainder of Boston SMSA** | N/A | | 3,508 | 26% | 1,259 | 25% |
| Remainder of Massachusetts | N/A | | 4,954 | 36% | 1,930 | 38% |
| Subtotal | 4,637 | 99% | 13,101 | 96% | 4,833 | 94% |
| Prisoners*** | 19 | 1% | 555 | 4% | 304 | 6% |
| **TRANSMISSION MODE (adults)** | 4,595 | | 13,448 | | 5,051 | |
| Male Sex w/Male | 2,309 | 50% | 5,473 | 41% | 1,572 | 31% |
| Injecting Drug User | 1,222 | 27% | 4,663 | 35% | 1,987 | 39% |
| Male/Male Sex & IDU | 170 | 4% | 522 | 4% | 160 | 3% |
| Receipt of blood/products | 63 | 1% | 331 | 2% | 95 | 2% |
| Heterosexual**** | 352 | 8% | 1,232 | 9% | 636 | 13% |
| Undetermined****/Other | 479 | 10% | 1,227 | 9% | 601 | 12% |
| **TRANSMISSION MODE (pediatric)** | 61 | | 208 | | 86 | |
| Mother w/AIDS/at risk for HIV | 53 | 87% | 180 | 87% | 76 | 88% |
| Receipt of blood/products | 6 | 10% | 25 | 12% | 8 | 9% |
| Undetermined**** | 2 | 3% | 3 | 1% | 2 | 3% |
| **GENDER** | 4,656 | | 13,656 | | 5,137 | |
| Male | 3,906 | 84% | 11,041 | 81% | 3,886 | 76% |
| Female | 750 | 16% | 2,615 | 19% | 1,251 | 24% |
| **RACE/ETHNICITY** | 4,656 | | 13,656 | | 5,137 | |
| White | 2,345 | 50% | 7,872 | 58% | 2,494 | 49% |
| Black | 1,730 | 37% | 3,174 | 23% | 1,330 | 26% |
| Hispanic | 541 | 12% | 2,505 | 18% | 1,263 | 25% |
| Other/Unknown | 40 | 1% | 105 | 1% | 50 | 1% |
| **AGE GROUP (years)** | 4,656 | | 13,656 | | 5,137 | |
| Under 13 | 58 | 1% | 195 | 1% | 77 | 1% |
| 13 - 19 | 8 | 0% | 52 | 0% | 28 | 1% |
| 20 - 29 | 774 | 17% | 2,291 | 17% | 870 | 17% |
| 30 - 39 | 2,327 | 50% | 6,697 | 49% | 2,524 | 49% |
| 40 - 49 | 1,133 | 24% | 3,386 | 25% | 1,312 | 26% |
| Over 49 | 356 | 8% | 1,035 | 8% | 326 | 6% |

* In the past, the AIDS Surveillance Program received case reports on some out-of-state residents diagnosed in MA. These cases were incorporated into our database and listed as out-of-state cases. As of 10/1/96, in keeping with current CDC guidelines, these cases will no longer be included in our database.

** Refers to the most recent Boston Standard Metropolitan Statistical Area;

*** Cases diagnosed while in prison.

**** Heterosexual cases formerly based on Pattern II criteria now classified as "Undetermined."

## RESOURCES

***A Message to Health Care Providers***

AIDS is designated as a reportable condition by under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

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For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.

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# Massachusetts HIV/AIDS Quarterly Review

*A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program Winter, 1998*

To my colleagues and friends,

It is with mixed emotions that I write to inform you I will be leaving the AIDS Bureau to take the position of Executive Director of the City of Boston's Public Health Commission. I have worked for the Massachusetts Department of Public Health for more than ten years, most of that time in the AIDS Bureau. When I started at the Department, the AIDS budget was about $15 million and the work was scattered throughout the Department. Now, thanks to the work of so many of you, we have seen the budget increase to more than $70 million. Under Commissioner David H. Mulligan, the AIDS Bureau has grown and developed over the years into a strong and consolidated entity, with dedicated and skilled employees.

Our new Commissioner, Dr. Howard Koh, has provided strong and wise leadership and a commitment to fighting the AIDS epidemic. He has prioritized the rapid selection of a new Bureau director and will personally involve himself in the Bureau's work until the new person is in place. I have known many of you for several years and have appreciated the sense of community support, shared purpose and friendship that exists among those who are fighting this horrific epidemic. I have been consistently amazed at the level of dedication and concern for those affected and infected by HIV. As I leave I want to express my heartfelt appreciation to each of you. I hope and expect our paths to continue to cross.

Sincerely,

John Auerbach

***The AIDS Bureau and AIDS Surveillance Program wishes John Auerbach all the best in his new position and expresses gratitude for his leadership and commitment over the years.***

## Grants Awarded to Help Patients Adhere to New HIV Treatments

The Community Research Initiative of New England (CRI/NE), with funding and support from the HIV/AIDS Bureau of the Massachusetts Department of Public Health, has awarded grants to 17 agencies to pilot innovative programs which will help those with HIV infection to take new combinations of medications. These seven-month awards reflect a commitment to help individuals "not likely" to adhere to extremely complicated drug regimens. Among whom are people whose lives are complicated by substance abuse, homelessness, mental illness, and recent incarceration. Adherence to treatment becomes less likely as regimens increase in complexity.or interfere with the patient's lifestyle. Uncomfortable or intolerable long-term side effects decrease adherence. Under the best of circumstances, adherence is a challenge. Add the myriad factors facing real people with real lives and the task becomes daunting. At the individual level, less than meticulous adherence may result in viral breakthrough. At the societal level, non-adherence may lead to drug resistant strains. These are the challenges that the agencies conducting these pilot programs have agreed to meet. Through rigorous analysis of data produced by such initiatives, we are hoping to learn which strategies promote adherence.

**(Continued on next page)**

**Grant Awards to Help Patients**
**(Continued from page 1)**

Agencies that were funded include local AIDS service organizations, home health agencies, peer-led organizations, substance abuse treatment facilities and community health clinics. In addition, collaborative ventures have been initiated among agencies from around the state.

Two particularly creative solutions are described below. The first involves addicted and homeless HIV-infected individuals; the second, people recently released from correctional facilities.

The Homeless Services of Boston, located at the Long Island Shelter, serves many men and women who have been homeless for at least one year and struggle with active drug and/or alcohol use. Many lack adequate education and some face significant mental health issues. The adherence program will address both the general shelter population as well as people living at Safe Harbor, a 20-bed residence for adults living with HIV infection. By building on existing health services, nursing assessments will result in treatment plans for each participant that incorporate individual counseling sessions and short, structured meetings three times a week. Elements that assist adherence include a guaranteed bed, a private locker, medication beepers, water bottles and educational materials.

SPAN Inc., a private, non-profit multiple service center for male offenders and ex-offenders, served 242 HIV+ men last year, nearly half of whom are taking HIV treatment medications. Of these, 97% had substance abuse histories, 70% served more than five years in prison and 59% were African American or Latino.

At a recent planning meeting, clients indicated that in addition to obstacles related to substance abuse and lack of housing, some participants had trouble understanding doctors' instructions and were reluctant to ask questions. They felt incompetent in addressing concerns and were afraid to learn more about their HIV infection. Clients also possessed much misinformation about medications.

In response, the SPAN project will fund a full time health educator based at the social center, where meals and activities for HIV+ clients are available. This person will provide education through informal and unstructured counseling and mentoring for clients on medications.

The health educator may accompany some clients to doctor's visits and help set up treatment plans. These plans may include use of wristbands, appointment books, telephone call-ins, diet planning and diaries. Adherence award ceremonies will be conducted to reinforce continuation of medication regimens.

Other strategies piloted by other agencies rely on peer support. People having success in compliance will make home visits to encourage and support those having difficulties. The Fenway Community Health Center for example, in conjunction with the Massachusetts General Hospital will use an approach that addresses the complex psychological and psychosocial factors that affect adherence.

In conclusion, the CRI, MDPH and the funded agencies are tremendously excited and look forward determining what factors increase adherence and ultimately, clinical outcomes. We are grateful for the many responses to this initiative and look forward to sharing what we learn from this endeavor.

*Agencies Awarded:*

*AIDS Action Committee (Boston)*

*All Care VNA of Greater Lynn, Inc.*

*Boston Living Center*

*Boston Medical Center, Children & Women, Maternity 2*

*Boston Medical Center, Homeless Services, Long Island Shelter*

*Community Medical Alliance (Boston)*

*Dimock Community Health Center (Roxbury)*

*Diversified VNA, CARE AIDS Services Project (Fitchburg)*

*Family Health & Social Service Center (Worcester)*

*Fenway Community Health Center (Boston)*

*Lowell Community Health Center*

*PACE (New Bedford)*

*SPAN, Inc. (Boston)*

*Springfield Southwest Community Health Center*

*Stanley Street Treatment and Resources (Fall River)*

*Upham's Corner Health Center (Dorchester)*

*VNA Care Plus, Inc. (Dedham)*

## TRENDS IN MASSACHUSETTS AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 2/1/98*

| Transmission Mode | < = 1988 | | 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Male Sex w/Male** | 1414 | 60% | 507 | 51% | 471 | 45% | 540 | 41% | 641 | 37% | 609 | 36% | 430 | 31% | 350 | 30% | 231 | 28% | 5281 | 41% |
| **IDU*** | 446 | 19% | 271 | 27% | 327 | 31% | 477 | 36% | 670 | 39% | 673 | 39% | 543 | 39% | 474 | 41% | 331 | 40% | 4348 | 34% |
| **MSM & IDU** | 109 | 5% | 48 | 5% | 42 | 4% | 58 | 4% | 62 | 4% | 68 | 4% | 48 | 3% | 42 | 4% | 11 | 1% | 496 | 4% |
| **Rec. of blood/prod.** | 100 | 4% | 37 | 4% | 26 | 2% | 34 | 3% | 59 | 3% | 30 | 2% | 13 | 1% | 12 | 1% | 14 | 2% | 328 | 3% |
| **Heterosexual** | | | | | | | | | | | | | | | | | | | | |
| Sex w/IDU | 57 | 2% | 31 | 3% | 49 | 5% | 50 | 4% | 74 | 4% | 85 | 5% | 87 | 6% | 63 | 5% | 47 | 6% | 561 | 4% |
| Sex w/Bi Male | | | | | | | | | | | 5 | 0% | 7 | 1% | | | 0 | 0% | 32 | 0% |
| Sex w/bld/prdt recip. | 0 | 0% | | | | | | | | | 5 | 0% | | | | | 5 | 1% | 28 | 0% |
| Sex w/HIV/AIDS | 20 | 1% | 12 | 1% | 17 | 2% | 32 | 2% | 64 | 4% | 75 | 4% | 95 | 7% | 88 | 8% | 66 | 8% | 517 | 4% |
| **Undetermined/Other** | | | | | | | | | | | | | | | | | | | | |
| Presumed Hetero-Unk risk of partner | 131 | 6% | 51 | 5% | 65 | 6% | 76 | 6% | 91 | 5% | 105 | 6% | 98 | 7% | 84 | 7% | 72 | 9% | 816 | 6% |
| Other Undeter/Other | 33 | 1% | 20 | 2% | 21 | 2% | 21 | 2% | 24 | 1% | 38 | 2% | 38 | 3% | 37 | 3% | 27 | 3% | 281 | 2% |
| **Pediatric** | 52 | 2% | 12 | 1% | 31 | 3% | 21 | 2% | 20 | 1% | 21 | 1% | 15 | 1% | 16 | 1% | 15 | 2% | 205 | 2% |
| **TOTAL (% of total)** | 2366 | (18%) | 995 | (8%) | 1055 | (8%) | 1316 | (10%) | 1712 | (13%) | 1714 | (13%) | 1376 | (11%) | 1170 | (9%) | 819 | (6%) | 12893 | (100%) |

## TRENDS IN BOSTON AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 2/1/98*

| Transmission Mode | < = 1988 | | 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Male Sex w/Male** | 668 | 62% | 228 | 59% | 201 | 55% | 237 | 52% | 277 | 48% | 221 | 42% | 177 | 43% | 123 | 39% | 86 | 35% | 2241 | 50% |
| **IDU*** | 194 | 18% | 82 | 21% | 77 | 21% | 122 | 27% | 190 | 33% | 169 | 32% | 114 | 28% | 93 | 30% | 83 | 34% | 1162 | 26% |
| **MSM & IDU** | 46 | 4% | 14 | 4% | 13 | 4% | 22 | 5% | 20 | 3% | 17 | 3% | 15 | 4% | 16 | 5% | | | 166 | 4% |
| **Rec. of blood/prod.** | 14 | 1% | 10 | 3% | 9 | 2% | 8 | 2% | 8 | 1% | 5 | 1% | | | | | | | 64 | 1% |
| **Heterosexual:** | | | | | | | | | | | | | | | | | | | | |
| Sex w/IDU | 23 | 2% | 10 | 3% | 12 | 3% | 11 | 2% | 12 | 2% | 25 | 5% | 24 | 6% | 16 | 5% | 7 | 3% | 143 | 3% |
| Sex w/Bi Male | | | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | | | | | 0 | 0% | 0 | 0% | | |
| Sex w/bld/prdt recip. | 0 | 0% | 0 | 0% | 0 | 0% | | | | | | | 0 | 0% | 0 | 0% | | | | |
| Sex w/HIV/AIDS | 11 | 1% | | | | | 8 | 2% | 24 | 4% | 21 | 4% | 30 | 7% | 25 | 8% | 24 | 10% | 175 | 4% |
| **Undetermined/Other:** | | | | | | | | | | | | | | | | | | | | |
| Presumed Hetero-Un risk of partner | 78 | 7% | 26 | 7% | 33 | 9% | 30 | 7% | 35 | 6% | 42 | 8% | 32 | 8% | 24 | 8% | 29 | 12% | 341 | 8% |
| Other Undeter/Other | 15 | 1% | 10 | 3% | 11 | 3% | 5 | 1% | 9 | 2% | 14 | 3% | 13 | 3% | 9 | 3% | 5 | 2% | 101 | 2% |
| **Pediatric** | 21 | 2% | | | 6 | 1% | 8 | 2% | | | 5 | 1% | 5 | 1% | | | 5 | 2% | 61 | 1% |
| **TOTAL (% of total)** | 1071 | (24%) | 387 | (9%) | 365 | (8%) | 452 | (10%) | 580 | (13%) | 521 | (12%) | 413 | (9%) | 313 | (7%) | 247 | (6%) | 4462 | (100%) |

*Injecting Drug User

**Includes: those w/other undetermined risks, those who refused follow-up interview, those have died with no determined risk, those who have been lost to follow-up, & those with a confirmed occupational risk.

***Row totals include cases diagnosed in 1997.

**NOTE: Blank cells indicate <5 cases reported in category.**

## HIV Projections: Where is the Epidemic Going?

Projections of HIV infection and AIDS cases have been generated using various methods. Accurate predictions of what will happen in the future are valuable for planning prevention, social, medical and other services.

In 1994, the AIDS Surveillance Program developed projections of HIV/AIDS for Massachusetts (see *Massachusetts HIV/AIDS Quarterly Review*, Vol. 2, No. 2, October 1995). These projections were used in *Moving Forward – 1995-1999* (JSI Research and Training Institute and Massachusetts Department of Public Health). The projections were modeled on national projections and extended trends into the future.

All methods of projecting depend on certain assumptions. Projections are accurate to the extent that the assumptions are appropriate for the time the projections are developed and remain so into the future to which the projections are applied.

Projection of HIV/AIDS trends, always a difficult undertaking, has become virtually impossible at present. While general trends have emerged in the past two years, such as declining numbers of HIV-infected persons progressing to AIDS, dramatic responses to newer antiretroviral therapies, decreasing mortality rates and shifting AIDS-defining conditions; quantitative predictions attached to these trends have not been forthcoming.

One reason for the current difficulty in projecting HIV/AIDS is that the effectiveness of the newer antiretroviral agents and combinations of drugs has exceeded expectations. More people are being treated more effectively. This is great clinically, but leads to uncertainties about the full impact and the potential for less effectiveness in the future. How much better will this trend get? How long will success last in the face of HIV developing resistance to antiviral agents? How will difficulties in taking multiple medications affect the length of time treatment will be effective? Will there be a delayed wave of AIDS-defining conditions now postponed by effective treatment?

Additional problems relate to how HIV and AIDS surveillance is done. The 1993 Centers for Disease Control and Prevention (CDC) AIDS case definition includes HIV infection with severe immune compromise (CD4+ T-lymphocyte count of <200 per $mm^3$ and <14% total T cells), without AIDS-defining illness. Previously, AIDS was defined by a clearcut clinical event – an illness. This resulted in consistency over time. The development of AIDS was a definable occurrence, even when an AIDS-defining condition occurred in someone who was unaware of their HIV status.

The newer case definition, based on a laboratory test, depends on people knowing their HIV status and entering into health care, thereby having a T cell count performed, so that they would be reported as an AIDS case, if the count was below the cut-off. Individuals may have a T cell count below 200 per $mm^3$ for any period of time and they, their practitioner and the surveillance system might be unaware of their meeting the case definition. In many cases, newer antiretroviral therapy has reversed declines in T cell counts and has resulted in higher counts in persons who had, or might have had, less than 200 cells per $mm^3$. Thus, any system of making predictions on the basis of consistent incidence of AIDS and related assumptions cannot be applied.

While delays in collection and analysis of surveillance data have always been a problem, at this later stage of the epidemic, and in light of the rapid changes related to circumstances noted above, reporting lag and incomplete reporting require even more attention to correct. Delay in ascertaining AIDS cases and AIDS deaths has meant a delay in fully appreciating the impact of recent treatment advances.

It has been suggested that HIV surveillance will be helpful in making projections of HIV/AIDS. This is not necessarily the case. While HIV surveillance may provide more accurate and timely information about HIV infection and its natural history, a case definition dependent on the HIV laboratory test shares similar limitations with the AIDS case defined by CD4+ cell count. On the other hand, earlier information on HIV infection would contribute to planning by providing more timely data on trends.

Projections have always been difficult. They are more so now. New approaches to generate the information needed will have to be found to plan and allocate services. Recently initiated studies of treatment utilization, and prescribing, and medication adherence behaviors will help provide a basis for assumptions.

## MASSACHUSETTS RESIDENT AIDS CASES & RATES BY COUNTY

*Totals as of February 1, 1998***

| County | MA Cases No. | % | Cumulative Cases per 100,000* | Alive Cases No. | % |
|---|---|---|---|---|---|
| Barnstable | 478 | 3.9% | 256.2 | 157 | 3.6% |
| Berkshire | 78 | 0.6% | 56.0 | 19 | 0.4% |
| Bristol | 805 | 6.5% | 159.0 | 310 | 7.1% |
| Essex | 969 | 7.8% | 144.6 | 366 | 8.4% |
| Franklin | 41 | 0.3% | 58.5 | 13 | 0.3% |
| Hampden | 1,205 | 9.7% | 264.1 | 472 | 10.9% |
| Hampshire | 121 | 1.0% | 82.6 | 39 | 0.9% |
| Islands | 35 | 0.3% | 198.3 | 11 | 0.3% |
| Middlesex | 1,850 | 14.9% | 132.3 | 613 | 14.1% |
| Norfolk | 632 | 5.1% | 102.6 | 195 | 4.5% |
| Plymouth | 494 | 4.0% | 113.5 | 158 | 3.6% |
| Suffolk | 4,696 | 37.9% | 707.3 | 1,606 | 36.9% |
| Worcester | 992 | 8.0% | 139.8 | 389 | 8.9% |
| TOTAL | 12,396 | 100% | 206.0 | 4,348 | 100% |

** Persons diagnosed while in MA prisons are not included.
* Based on 1990 Census

## MASSACHUSETTS AIDS CASES

*Cumulative Cases Reported as of 2/1/98*

| MALES | WHITE No. | WHITE % | BLACK No. | BLACK % | HISPANIC No. | HISPANIC % | TOTAL* No. | TOTAL* % |
|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 4,469 | 68% | 463 | 22% | 303 | 18% | 5,281 | 50% |
| Injecting Drug User | 1,163 | 18% | 901 | 43% | 1,098 | 64% | 3,183 | 30% |
| Male/Male Sex & IDU | 348 | 5% | 83 | 4% | 63 | 4% | 496 | 5% |
| Receipt of blood/products | 202 | 3% | 19 | 1% | 17 | 1% | 242 | 2% |
| Heterosexual: | | | | | | | | |
| Sex w/IDU | 51 | 1% | 49 | 2% | 27 | 2% | 127 | 1% |
| Sex w/recpt of bld/prdts. | | | | | | | 7 | |
| Sex w/HIV/AIDS | 61 | 1% | 95 | 5% | 64 | 4% | 222 | 2% |
| Undetermined: | | | | | | | | |
| Presumed Hetero-Unk Risk of Prtnr | 152 | 2% | 325 | 16% | 91 | 5% | 575 | 5% |
| Other Undetermined** | 95 | 1% | 93 | 4% | 34 | 2% | 227 | 2% |
| Pediatric | 39 | 1% | 47 | 2% | 31 | 2% | 118 | 1% |
| Total Male (% of all cases)* | 6,583 | 63% | 2,078 | 20% | 1,729 | 17% | 10,478 | 100% |

| FEMALES | WHITE No. | WHITE % | BLACK No. | BLACK % | HISPANIC No. | HISPANIC % | TOTAL* No. | TOTAL* % |
|---|---|---|---|---|---|---|---|---|
| Injecting Drug User | 556 | 59% | 364 | 42% | 243 | 41% | 1,165 | 48% |
| Receipt of blood/products | 55 | 6% | 19 | 2% | 9 | 2% | 86 | 4% |
| Heterosexual: | | | | | | | | |
| Sex w/IDU | 132 | 14% | 117 | 13% | 184 | 31% | 434 | 18% |
| Sex w/Bi Male | 21 | 2% | 8 | 1% | | | 32 | 1% |
| Sex w/recpt of bld/prdts. | 16 | 2% | | | | | 21 | 1% |
| Sex w/HIV/AIDS | 75 | 8% | 135 | 16% | 84 | 14% | 295 | 12% |
| Undetermined | | | | | | | | |
| Presumed Hetero-Unk Risk of Prtnr | 48 | 5% | 164 | 19% | 27 | 5% | 241 | 10% |
| Other Undetermined** | 13 | 1% | 25 | 3% | 15 | 3% | 54 | 2% |
| Pediatric | 22 | 2% | 35 | 4% | 29 | 5% | 87 | 4% |
| Total Female (% of all cases) | 938 | 39% | 870 | 36% | 596 | 25% | 2,415 | 100% |

| TOTAL CASES | 7,521 | 2,948 | 2,325 | 12,893 |
|---|---|---|---|---|

*Total includes other and unknown races and those with confirmed occupational exposures.

**Includes: those w/ other undetermined risks, those who refused follow-up interview, those who have died with no determined risk, & those who have been lost to follow-up.

**Note: Blank cells indicate less than five people reported.**

# AIDS SURVEILLANCE SUMMARY

**Total Cases Reported in January, 1998 : 62**

| Total Cases reported as of 2/1/98 | Boston 4,462 No. | Boston % | Massachusetts 12,893 No. | Massachusetts % | Alive in State 4,602 No. | Alive in State % |
|---|---|---|---|---|---|---|
| **RESIDENCE*** | | | | | | |
| City of Boston | 4,443 | 99% | 4,443 | 34% | 1,524 | 33% |
| Remainder of Boston SMSA** | | | 3,276 | 25% | 1,083 | 24% |
| Remainder of Massachusetts | | | 4,677 | 36% | 1,741 | 38% |
| Subtotal | 4,443 | 99% | 12,396 | 96% | 4,348 | 94% |
| Prisoners*** | 19 | 1% | 497 | 4% | 254 | 6% |
| **TRANSMISSION MODE (adults)** | 4,401 | | 12,688 | | 4,516 | |
| Male Sex w/Male | 2,241 | 51% | 5,281 | 42% | 1,444 | 32% |
| Injecting Drug User | 1,162 | 26% | 4,348 | 34% | 1,773 | 39% |
| Male/Male Sex & IDU | 166 | 4% | 496 | 4% | 144 | 3% |
| Receipt of blood/products | 64 | 1% | 328 | 3% | 97 | 2% |
| Heterosexual**** | 326 | 7% | 1,138 | 9% | 568 | 13% |
| Undetermined****/Other | 442 | 10% | 1,097 | 9% | 490 | 11% |
| **TRANSMISSION MODE (pediatric)** | 61 | | 205 | | 86 | |
| Mother w/AIDS/at risk for HIV | 53 | 87% | 178 | 87% | 77 | 90% |
| Receipt of blood/products | 6 | 10% | 25 | 12% | 8 | 9% |
| Undetermined**** | | | | | | |
| **GENDER** | 4,462 | | 12,893 | | 4,602 | |
| Male | 3,765 | 84% | 10,478 | 81% | 3,496 | 76% |
| Female | 697 | 16% | 2,415 | 19% | 1,106 | 24% |
| **RACE/ETHNICITY** | 4,462 | | 12,893 | | 4,602 | |
| White | 2,276 | 51% | 7,521 | 58% | 2,281 | 50% |
| Black | 1,633 | 37% | 2,948 | 23% | 1,166 | 25% |
| Hispanic | 518 | 12% | 2,325 | 18% | 1,116 | 24% |
| Other/Unknown | 35 | 1% | 99 | 1% | 39 | 1% |
| **AGE GROUP (years)** | 4,462 | | 12,893 | | 4,602 | |
| Under 13 | 58 | 1% | 194 | 2% | 78 | 2% |
| 13 - 19 | 8 | 0% | 48 | 0% | 25 | 1% |
| 20 - 29 | 748 | 17% | 2,192 | 17% | 796 | 17% |
| 30 - 39 | 2,237 | 50% | 6,330 | 49% | 2,265 | 49% |
| 40 - 49 | 1,078 | 24% | 3,171 | 25% | 1,160 | 25% |
| Over 49 | 333 | 7% | 958 | 7% | 278 | 6% |

* **In the past, the AIDS Surveillance Program received case reports on some out-of-state residents diagnosed in MA. These cases were incorporated into our database and listed as out-of-state cases. As of 10/1/96, in keeping with current CDC guidelines, these cases will no longer be included in our database.**

** Refers to the most recent Boston Standard Metropolitan Statistical Area;

*** Cases diagnosed while in prison.

**** Heterosexual cases formerly based on Pattern II criteria now classified as "Undetermined."

## RESOURCES

***A Message to Health Care Providers***

AIDS is designated as a reportable condition under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560

Massachusetts Department of Public Health
305 South Street
Jamaica Plain, MA 02130-3597

MASS. HS 30.2: 999/SPRING

GOVERNMENT DOCUMENTS
COLLECTION

# Massachusetts HIV/Aids Quarterly Review

University of Massachusetts
Depository Copy

*A newsletter of the HIV/AIDS Bureau and AIDS Surveillance Program Spring, 1999*

## The Spectrum of Pediatric HIV Disease in Massachusetts

As of January 1, 1999 two hundred and eight cases of AIDS in children <13 years old have been reported to the Massachusetts AIDS Surveillance Program. Pediatric AIDS cases account for 2% of cases reported in Massachusetts, a percentage comparable to national figures. The most common AIDS-defining conditions reported in children are shown in table 1.

In Massachusetts, since 1989 pediatric HIV cases have been followed prospectively by the "Pediatric Spectrum of Disease" (PSD) project. Funded by the Centers for Disease Control and Prevention, the PSD project is currently in its 10th year of data collection from 7 study sites across the state. Data are received and recorded without personal identifiers. Nurses at seven hospital sites are responsible for updating clinical data on these children every six months.

As of January 1, 1999, a total of 1224 perinatally HIV exposed or infected children have been identified. There are 392 children who are HIV-infected, 684 who are seroreverters (uninfected) and 148 whose infection status is indeterminate (too early to tell) or who are lost to follow-up. One hundred and thirty three children have died.

Diagnosis of HIV infection in newborns is routinely done by HIV culture and polymerase chain reaction (PCR). Babies as young as one month of age can be identified as HIV-infected by using these methods. Because of the mother's antibody in the child, an

**Table 1.**

**Most Common AIDS-Defining Conditions***

| Condition | # |
|---|---|
| Pneumocystis carinii pneumonia | 76 |
| HIV encephalopathy | 71 |
| Lymphoid interstitial pneumonia | 63 |
| Candidiasis, esophageal | 50 |
| Recurrent bacterial infections | 47 |
| Wasting syndrome | 30 |

*Cases can have more than 1 diagnosis

antibody test (ELISA, Western Blot) is not useful in the infant. Older children suspected of being HIV-infected can be tested in the same way as adults (antibody test). In addition, viral load testing assists in evaluating illness and success of antiretrovirals therapy.

Before the use of ZDV in pregnant women and their newborns, it was estimated that 20% to 25% of children born to HIV-infected mothers would be HIV-infected. In 1994, the results of the ACTG protocol 076 showed that the use of ZDV beginning in the second trimester of pregnancy, administered during labor and delivery and a six-week course given to the newborn reduced perinatal HIV transmission by two-thirds.[1] Several more recent trials have demonstrated that modified ZDV regimens also seem to be effective. These modified regimens include treating the mother just before and during delivery and treating the baby after birth. Therefore, identification of pregnant HIV-infected woman prior to delivery is critical in reducing transmission.

In recent years, the number of newborns with perinatal HIV infection has decreased in Massachusetts and across the nation. However, the total number of children living with HIV infection continues to increase. Figure 1 summarizes the clinical status of children born to HIV-infected women from the PSD project by year of birth. In figure 2 the median age of the HIV-infected children is shown. The median age of children living with HIV continues to rise. The majority of these children will reach school age and many will reach adolescence. Many HIV-infected children remain well for years with infrequent hospitalization and few miss long periods of school, while others may require lengthy hospitalization and suffer from debilitating illnesses. For a child with perinatally acquired HIV infection, a 1996 *Pediatrics* [2] article estimated the mean survival time (birth to death) as 9.4 years and the probability of surviving to 5 years of age was 75%. Because of the many new antiretrovirals available, the onset of severe symptoms is now being delayed even more.

In Massachusetts, the standard of medical care in all prenatal settings is for pregnant women to be counseled about HIV infection and encouraged to voluntarily test. In PSD, since 1994, 87% of the children's mothers knew of their HIV-infection prior to delivery and could make decisions for treatment for themselves and their babies. Of these women, 86% took ZDV for themselves and 92% gave ZDV to their babies. In 1997, 88% mother-baby pairs received ZDV. The Massachusetts Department of Public Health hopes to raise awareness among all women's health care providers in the state to provide universal HIV counseling and voluntary testing for all pregnant women. In that way, all women who are contemplating pregnancy or who are pregnant and receiving prenatal care can receive the present standard of care for HIV infection.

For further information about this study,please call (617)983-6566.

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[1] Connor EM, Sperling RS, Gelber R. Protocol 076 Reduction in maternal-infant transmission of HIV type 1 with zidovudine treatment. N Engl J Med. 1994;331:1173-1180.

[2] Barnhart HX, Caldwell MB, Thomas, P. et al. Natural history of human immunodeficiency virus disease in perinatally infected children: An analysis from the pediatric spectrum of disease project. Pediatrics Vol. 97 No. 5 May 1996.

Figure 1.

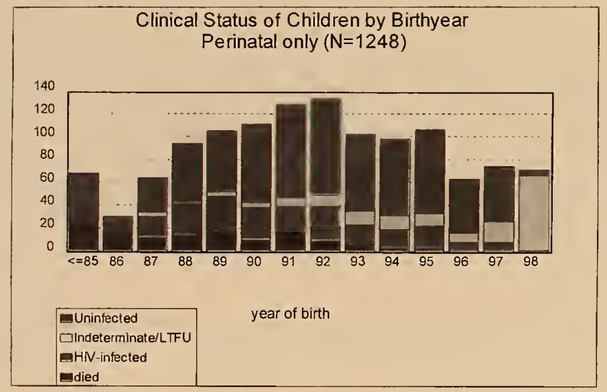
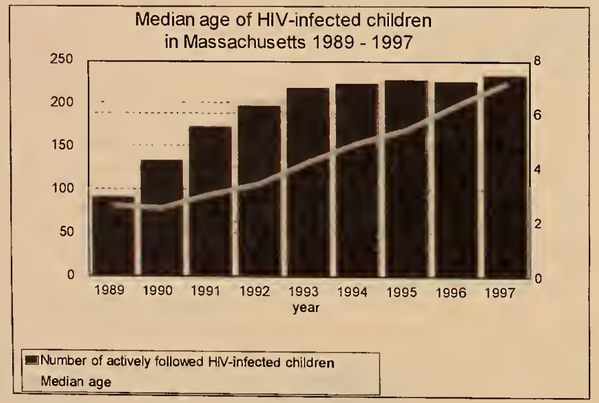



Figure 2.




## MASSACHUSETTS RESIDENT AIDS CASES & RATES BY COUNTY

*Totals as of APRIL 1, 1999**

| County | MA Cases No. | % | Cumulative Cases per 100,000** | Alive Cases No. | % |
|---|---|---|---|---|---|
| Barnstable | 509 | 3.7% | 272.8 | 172 | 3.3% |
| Berkshire | 94 | 0.7% | 67.5 | 33 | 0.6% |
| Bristol | 890 | 6.5% | 175.8 | 367 | 7.1% |
| Essex | 1,117 | 8.2% | 166.7 | 490 | 9.5% |
| Franklin | 43 | 0.3% | 61.3 | 15 | 0.3% |
| Hampden | 1,308 | 9.6% | 286.6 | 514 | 10.0% |
| Hampshire | 135 | 1.0% | 92.1 | 47 | 0.9% |
| Islands | 36 | 0.3% | 204.0 | 11 | 0.2% |
| Middlesex | 2,080 | 15.3% | 148.7 | 785 | 15.2% |
| Norfolk | 688 | 5.0% | 111.7 | 235 | 4.6% |
| Plymouth | 554 | 4.1% | 127.3 | 200 | 3.9% |
| Suffolk | 5,097 | 37.4% | 767.7 | 1,864 | 36.1% |
| Worcester | 1,073 | 7.9% | 151.2 | 429 | 8.3% |
| TOTAL | 13,624 | 100% | 226.4 | 5,162 | 100% |

* Persons diagnosed while in MA prisons are not included.
** Based on 1990 Census

## MASSACHUSETTS AIDS CASES BY GENDER AND RACE/ETHNICITY

*Cumulative Cases Reported as of 4/1/99*

**MALES**

| MODE OF TRANSMISSION | WHITE No. | % | BLACK No. | % | HISPANIC No. | % | TOTAL* No. | % |
|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 4,703 | 67% | 515 | 22% | 332 | 17% | 5,599 | 49% |
| Injecting Drug User (IDU) | 1,310 | 19% | 988 | 42% | 1,248 | 64% | 3,564 | 31% |
| Male/Male Sex & IDU | 370 | 5% | 93 | 4% | 73 | 4% | 539 | 5% |
| Receipt of blood/products | 210 | 3% | 24 | 1% | 20 | 1% | 258 | 2% |
| Heterosexual: | 126 | 2% | 170 | 7% | 105 | 5% | 404 | 4% |
| Sex w/IDU | 57 | 1% | 56 | 2% | 30 | 2% | 143 | 1% |
| Sex w/recpt of bld/prdts. | 3 | 0% | 3 | 0% | 1 | 0% | 7 | 0% |
| Sex w/HIV/AIDS | 66 | 1% | 111 | 5% | 74 | 4% | 254 | 2% |
| Undetermined: | 296 | 4% | 488 | 21% | 149 | 8% | 951 | 8% |
| Presumed Hetero-Unk Risk of Prtnr | 195 | 3% | 392 | 17% | 113 | 6% | 710 | 6% |
| Other Undetermined** | 101 | 1% | 96 | 4% | 36 | 2% | 241 | 2% |
| Pediatric | 39 | 1% | 49 | 2% | 33 | 2% | 122 | 1% |
| Total Male (% of all cases)* | 7,054 | 62% | 2,327 | 20% | 1,960 | 17% | 11,437 | 100% |

**FEMALES**

| MODE OF TRANSMISSION | WHITE No. | % | BLACK No. | % | HISPANIC No. | % | TOTAL* No. | % |
|---|---|---|---|---|---|---|---|---|
| Injecting Drug User (IDU) | 630 | 59% | 414 | 40% | 267 | 40% | 1,315 | 47% |
| Receipt of blood/products | 59 | 6% | 29 | 3% | 17 | 3% | 108 | 4% |
| Heterosexual: | 273 | 26% | 312 | 30% | 309 | 46% | 896 | 32% |
| Sex w/IDU | 147 | 14% | 135 | 13% | 204 | 31% | 487 | 18% |
| Sex w/Bi Male | 22 | 2% | 8 | 1% | 4 | 1% | 34 | 1% |
| Sex w/recpt of bld/prdts. | 18 | 2% | 4 | 0% | 3 | 0% | 25 | 1% |
| Sex w/HIV/AIDS | 86 | 8% | 165 | 16% | 98 | 15% | 350 | 13% |
| Undetermined | 78 | 7% | 247 | 24% | 45 | 7% | 372 | 13% |
| Presumed Hetero-Unk Risk of Prtnr | 67 | 6% | 219 | 21% | 39 | 6% | 327 | 12% |
| Other Undetermined** | 11 | 1% | 28 | 3% | 6 | 1% | 45 | 2% |
| Pediatric | 23 | 2% | 36 | 3% | 30 | 4% | 89 | 3% |
| Total Female (% of all cases) | 1,063 | 38% | 1,038 | 37% | 668 | 24% | 2,780 | 100% |

| TOTAL CASES | 8,117 | 3,365 | 2,628 | 14,217 |
|---|---|---|---|---|

*Total includes other and unknown races and those with confirmed occupational exposures.
**Includes: those w/ other undetermined risks, those who refused follow-up interview, those who have died with no determined risk, & those who have been lost to follow-up.

## TRENDS IN MASSACHUSETTS AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 4/1/99*

| Transmission Mode | < = 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 1927 | 57% | 478 | 45% | 544 | 41% | 646 | 37% | 614 | 35% | 441 | 31% | 375 | 29% | 265 | 27% | 167 | 25% | 5599 | 39% |
| Injecting Drug User | 721 | 21% | 330 | 31% | 484 | 36% | 677 | 39% | 684 | 39% | 559 | 39% | 530 | 42% | 390 | 40% | 259 | 39% | 4879 | 34% |
| MSM & IDU | 157 | 5% | 43 | 4% | 58 | 4% | 63 | 4% | 73 | 4% | 54 | 4% | 45 | 4% | 19 | 2% | 15 | 2% | 539 | 4% |
| Rec. of blood/prod. | 136 | 4% | 28 | 3% | 37 | 3% | 63 | 4% | 34 | 2% | 12 | 1% | 18 | 1% | 17 | 2% | 10 | 1% | 366 | 3% |
| Heterosexual | 130 | 4% | 73 | 7% | 90 | 6% | 146 | 8% | 168 | 9% | 196 | 14% | 164 | 12% | 149 | 15% | 102 | 16% | 1300 | 8% |
| Sex w/IDU | 88 | 3% | 49 | 5% | 51 | 4% | 75 | 4% | 82 | 5% | 90 | 6% | 66 | 5% | 60 | 6% | 35 | 5% | 630 | 4% |
| Sex w/Bi Male | 6 | 0% | 4 | 0% | 4 | 0% | 4 | 0% | 5 | 0% | 7 | 0% | 2 | 0% | 0 | 0% | 1 | 0% | 34 | 0% |
| Sex w/bid/prdt recip. | 4 | 0% | 2 | 0% | 3 | 0% | 3 | 0% | 6 | 0% | 3 | 0% | 2 | 0% | 6 | 1% | 2 | 0% | 32 | 0% |
| Sex w/HIV/AIDS | 32 | 1% | 18 | 2% | 32 | 2% | 64 | 4% | 75 | 4% | 96 | 7% | 94 | 7% | 83 | 9% | 64 | 10% | 604 | 4% |
| Undetermined/Other | 233 | 7% | 86 | 8% | 96 | 8% | 108 | 6% | 142 | 8% | 140 | 10% | 128 | 11% | 110 | 12% | 112 | 17% | 1323 | 9% |
| Presumed Hetero-Unk risk of partner | 182 | 5% | 68 | 6% | 77 | 6% | 91 | 5% | 105 | 6% | 103 | 7% | 98 | 8% | 86 | 9% | 90 | 13% | 1037 | 7% |
| Other Undeter/Other* | 51 | 2% | 18 | 2% | 19 | 1% | 17 | 1% | 37 | 2% | 37 | 3% | 30 | 2% | 24 | 2% | 22 | 3% | 286 | 2% |
| Pediatric | 64 | 2% | 31 | 3% | 21 | 2% | 20 | 1% | 21 | 1% | 15 | 1% | 16 | 1% | 16 | 2% | 4 | 1% | 211 | 1% |
| TOTAL (% of total) | 3368 | (24%) | 1069 | (8%) | 1330 | (9%) | 1723 | (12%) | 1736 | (12%) | 1417 | (10%) | 1276 | (9%) | 966 | (7%) | 669 | (5%) | 14217 | (100%) |

## TRENDS IN BOSTON AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 4/1/99**

| Transmission Mode | < = 1989 | | 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 898 | 62% | 202 | 55% | 239 | 53% | 280 | 48% | 224 | 42% | 182 | 43% | 132 | 39% | 92 | 34% | 55 | 30% | 2360 | 49% |
| Injecting Drug User | 275 | 19% | 78 | 21% | 121 | 27% | 191 | 33% | 173 | 33% | 114 | 27% | 101 | 30% | 85 | 31% | 51 | 28% | 1250 | 28% |
| MSM & IDU | 59 | 4% | 13 | 4% | 22 | 5% | 19 | 3% | 17 | 3% | 16 | 4% | 18 | 5% | 6 | 2% | 0 | 0% | 172 | 4% |
| Rec. of blood/prod. | 24 | 2% | 10 | 3% | 9 | 2% | 10 | 2% | 6 | 1% | 1 | 0% | 4 | 1% | 4 | 1% | 3 | 2% | 74 | 2% |
| Heterosexual | 48 | 3% | 15 | 4% | 20 | 4% | 38 | 6% | 47 | 9% | 59 | 13% | 44 | 13% | 42 | 14% | 39 | 24% | 375 | 7% |
| Sex w/IDU | 33 | 2% | 12 | 3% | 11 | 2% | 12 | 2% | 24 | 5% | 25 | 6% | 16 | 5% | 11 | 4% | 7 | 4% | 160 | 3% |
| Sex w/Bi Male | 1 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 2 | 0% | 0 | 0% | 0 | 0% | 1 | 1% | 5 | 0% |
| Sex w/bid/prdt recip. | 0 | 0% | 0 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 0 | 0% | 4 | 0% |
| Sex w/HIV/AIDS | 14 | 1% | 3 | 1% | 8 | 2% | 25 | 4% | 21 | 4% | 32 | 8% | 28 | 8% | 30 | 11% | 31 | 17% | 206 | 4% |
| Undetermined/Other | 128 | 9% | 44 | 12% | 35 | 8% | 39 | 7% | 56 | 11% | 45 | 11% | 38 | 11% | 37 | 13% | 35 | 19% | 507 | 10% |
| Presumed Hetero-Unk risk of partner | 103 | 7% | 34 | 9% | 31 | 7% | 34 | 6% | 42 | 8% | 33 | 8% | 31 | 9% | 31 | 11% | 26 | 14% | 409 | 9% |
| Other Undeter/Other* | 25 | 2% | 10 | 3% | 4 | 1% | 5 | 1% | 14 | 3% | 12 | 3% | 7 | 2% | 6 | 2% | 9 | 5% | 98 | 2% |
| Pediatric | 25 | 2% | 6 | 2% | 8 | 2% | 4 | 1% | 5 | 1% | 5 | 1% | 3 | 1% | 5 | 2% | 0 | 0% | 61 | 1% |
| TOTAL (% of total) | 1457 | (30%) | 368 | (8%) | 454 | (9%) | 581 | (12%) | 528 | (11%) | 422 | (9%) | 340 | (7%) | 271 | (6%) | 183 | (4%) | 4799 | (100%) |

* Boston cases do not include prisoners.

** Includes: those with other undetermined risks, those who refused follow-up interview, those have died with no determined risk, those lost to follow-up, and those w/confirmed occupational risk

***Row totals include cases diagnosed in 1998 and 1999.

MASSACHUSETTS AIDS SURVEILLANCE PROGRAM

# AIDS SURVEILLANCE SUMMARY

**Total Cases Reported in March, 1999 : 133**

| | Boston | | Massachusetts | | Alive in State | |
|---|---|---|---|---|---|---|
| CUMULATIVE Cases reported as of: 4/1/99 | 4,824 | | 14,217 | | 5,491 | |
| | No. | % | No. | % | No. | % |
| **RESIDENCE*** | 4,824 | | 14,217 | | 5,491 | |
| City of Boston | 4,799 | 99% | 4,799 | 34% | 1,747 | 32% |
| Remainder of Boston SMSA** | N/A | | 3,670 | 26% | 1,380 | 25% |
| Remainder of Massachusetts | N/A | | 5,155 | 36% | 2,035 | 37% |
| Subtotal | 4,799 | 99% | 13,624 | 96% | 5,162 | 94% |
| Prisoners*** | 25 | 1% | 593 | 4% | 329 | 6% |
| **TRANSMISSION MODE (adults)** | 4,763 | | 14,006 | | 5,403 | |
| Male Sex w/Male | 2,361 | 50% | 5,599 | 40% | 1,656 | 31% |
| Injecting Drug User | 1,270 | 27% | 4,879 | 35% | 2,097 | 39% |
| Male/Male Sex & IDU | 173 | 4% | 539 | 4% | 169 | 3% |
| Receipt of blood/products | 74 | 2% | 366 | 3% | 116 | 2% |
| Heterosexual**** | 375 | 8% | 1,300 | 9% | 678 | 13% |
| Undetermined****/Other | 510 | 11% | 1,323 | 9% | 687 | 13% |
| **TRANSMISSION MODE (pediatric)** | 61 | | 211 | | 88 | |
| Mother w/AIDS/at risk for HIV | 53 | 87% | 182 | 86% | 77 | 88% |
| Receipt of blood/products | 6 | 10% | 25 | 12% | 8 | 9% |
| Undetermined**** | 2 | 3% | 4 | 2% | 3 | 4% |
| **GENDER** | 4,824 | | 14,217 | | 5,491 | |
| Male | 4,020 | 83% | 11,437 | 80% | 4,135 | 75% |
| Female | 804 | 17% | 2,780 | 20% | 1,356 | 25% |
| **RACE/ETHNICITY** | 4,824 | | 14,217 | | 5,491 | |
| White | 2,396 | 50% | 8,117 | 57% | 2,638 | 48% |
| Black | 1,824 | 38% | 3,365 | 24% | 1,461 | 27% |
| Hispanic | 562 | 12% | 2,628 | 18% | 1,340 | 24% |
| Other/Unknown | 42 | 1% | 107 | 1% | 52 | 1% |
| **AGE GROUP (years)** | 4,824 | | 14,217 | | 5,491 | |
| Under 13 | 58 | 1% | 198 | 1% | 79 | 1% |
| 13 - 19 | 9 | 0% | 54 | 0% | 30 | 1% |
| 20 - 29 | 794 | 16% | 2,351 | 17% | 896 | 16% |
| 30 - 39 | 2,406 | 50% | 6,946 | 49% | 2,683 | 49% |
| 40 - 49 | 1,178 | 24% | 3,563 | 25% | 1,428 | 26% |
| Over 49 | 379 | 8% | 1,105 | 8% | 375 | 7% |

*** In the past, the AIDS Surveillance Program received case reports on some out-of-state residents diagnosed in MA. These cases were incorporated into our database and listed as out-of-state cases. As of 10/1/96, in keeping with current CDC guidelines, these cases will no longer be included in our database.**

** Refers to the most recent Boston Standard Metropolitan Statistical Area;

*** Cases diagnosed while in prison.

**** Heterosexual cases formerly based on Pattern II criteria now classified as "Undetermined."

## RESOURCES

### *A Message to Health Care Providers*

AIDS is designated as a reportable condition by under regulation (105 CMR 300,000 et seq). All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. AIDS case information is held in strict confidence. Please feel free to call the AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

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For case reporting of AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560.

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Jamaica Plain, MA 02130-3597

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# Massachusetts HIV/AIDS Quarterly Review

**Fall 1999**

*A newsletter of the HIV/AIDS Bureau and HIV/AIDS Surveillance Program*

## Injection Drug Use and AIDS: Interview Data Regarding Risk Concerns and Service Utilization

Injection drug use (IDU) is the most frequent single mode of HIV transmission in Massachusetts. As of June 1, 1999, thirty-eight percent of people living with AIDS acquired HIV due to a personal history of injection drug use. Over one-third (35%; n=4,929) of cumulative Massachusetts AIDS cases reported as of July 1, 1999, have a history of IDU (47% of women and 31% of men). This proportion increases to 40% when IDU-related cases resulting from either heterosexual sex with an IDU or IDU-related perinatal transmission cases are included. For women, 65% of cumulative AIDS cases are due to having either a history of IDU or heterosexual sex with an IDU. For men, an additional 5% of cumulative male AIDS cases have both a history of IDU and sex with men. People of color are disproportionately represented among IDUs living with AIDS. As of July 1, 1999, 36% of IDUs living with AIDS were Hispanic/Latino and 26% were Black.

HIV (and other bloodborne pathogens such as hepatitis C) is transmitted during injection drug use through the sharing and reuse of contaminated needles, syringes, and equipment such as cotton, cookers, and rinse water [1]. Seroprevalence has been reported to be as high as 65% for HCV and 14% for HIV within the first year of injecting, increasing with cumulative exposure.[2] A serosurvey among out-of-treatment injection drug users in New Bedford from 11/97 – 1/98 documented an overall HIV seroprevalence of 26% (HIV/AIDS Epidemiological Profile FY '99: CDC Cooperative Agreement, HIV/AIDS Bureau, MDPH, FY '99).

Data from a recent pilot project is presented to provide additional information regarding risk concerns associated with injection drug use. This report presents data about injection drug use, the acquisition of needles/syringes, and needle sharing and cleaning (see the Summer 1998 'HIV/AIDS Quarterly Review' for "Income, Insurance and Housing Among AIDS Patients").

Methods:

The Massachusetts AIDS Surveillance Program conducted one-time, in-person interviews with people living with AIDS as a pilot project to explore ways of obtaining information that would assist HIV prevention and care planning. A random sample of people

[1] Koester S, Booth RE, Zhang Y. The prevalence of additional injection-related HIV risk behaviors among injection drug users. J Acquir Immune Defic Syndr Hum Retrovirol 1996; 12(2):202 –207.

[2] Garfein RS, Vlahov D, Galai N, Doherty MC, Nelson KE. Viral infections in short-term injection drug users: the prevalence of the hepatitis C, hepatitis B, human immunodeficiency, and human t-lymphotrophic viruses. Am J Public Health 1996; 86(5):655-661.

reported with an AIDS diagnosis from Massachusetts health care facilities was selected for interview. The participating sites were referral and community-based health care facilities located in all regions of the state, and the sites that provided care to a diverse group of clients. People reported from study sites were similar to persons living with AIDS in Massachusetts overall, with regard to gender, race, age, transmission risk, and AIDS-defining condition.

One-third of the men and all women reported from study sites during 8/95 to 3/97 were asked to participate in the interview. Participation was voluntary and informed consent was obtained. Interviews were conducted in English and Spanish. Of the people sampled who were medically able to participate (n=249), 95 participated in the interview, yielding a participation rate of 38%. While this participation rate should be considered when interpreting data from the project, the federal Centers for Disease Control and Prevention (CDC) reports that participation rates from nation-wide, population-based samples using the same interview instrument average 40% (personal communication, Dr. Nakashima, CDC, 7/99). There were no statistically significant differences between responders and non-responders by race/ethnicity, sex, or mode of transmission of HIV infection.

Interview Responses:

Among the 95 interview respondents, 42% (n=40) had "ever injected drugs with a needle." Fifty-three percent of the IDU respondents were women. Eighteen percent of the IDU respondents self-identified as Hispanic or Latino(a). Forty-five percent self-identified as White, 30% Black, and 25% as "other race." Eighty-eight percent of IDU respondents reported their sexual identity to be heterosexual/ "straight", and 10% reported being gay/lesbian/homosexual. Thirty-five percent completed high school, and 20% had received some post high school education. Twenty-three percent were working at the time of the interview.

Injectable heroin was the primary drug used by 60% of the IDU respondents, whereas 30% injected cocaine, 8% injected heroin and cocaine ("speedballs"), and 3% reported primarily injecting barbiturates. Fifty-eight percent (23) had injected drugs in the last 5 years prior to the interview, and 38% (15) had injected drugs in the last year. There were no significant differences in the history of IDU by sex.

Forty-four percent of the respondents who had ever injected drugs had a history of homelessness, and 55% reported contacting or utilizing mental health counseling at some point. A high lifetime prevalence of IDU among homeless individuals with severe mental illness in Boston has been reported.[3]

Twenty-eight percent of the IDU respondents reported being unable to enter a drug or alcohol treatment program in the past 5 years (7 women and 4 men). The problems preventing successful engagement in treatment were financial barriers, not meeting the admission criteria, and long waiting lists. Fifty-three percent reported being in some type of drug/alcohol treatment at the time of the interview (48% methadone maintenance, 38% alcoholics anonymous, 29% narcotics anonymous, 19% halfway house, 14% cocaine anonymous, and 14% drug-free outpatient treatment). Multiple responses could be selected for this question.

Of the respondents who had injected drugs in the last year (n=15): 40% injected drugs less than once a month on average, 7% typically injected once a week, 20% injected several times a week, and 33% typically injected several times a day.

---

[3] Susser E, Betne P, Valencia E, Goldfinger S, Lehman A. Injection drug use among homeless adults with severe mental illness. Am J Public Health 1997; 87(5):854-856.

Acquisition of Needles/Syringes:

Participants with an IDU history were asked, "where did you get the needles that you used to inject drugs?" Multiple responses could be selected for this question, and results are reported in Table 1.

**Table 1. Acquisition of Needles/Syringes (n=40)**

| | Total |
|---|---|
| Friends | 50% |
| Other | 25% |
| Street | 13% |
| Needle Exchange Program | 10% |
| Shooting Gallery | 3% |
| Pharmacy/Drug Store | 3% |

Currently in Massachusetts, drug paraphernalia laws make it illegal to possess needles and syringes, and prescription laws make the selling of needles/syringes by pharmacists and their possession without a prescription illegal. An exception to the law allows needle exchange program participants to legally possess needles and syringes throughout the state. Needle exchange programs (NEPs) provide reliable sources of sterile injection equipment and information regarding services and drug treatment. In 1995, its second year of operation, the Boston NEP linked 224 clients to drug treatment ("Injection Drug Use in Massachusetts," MDPH HIV/AIDS Bureau and The Mass. Prevention Planning Group, 3/97). There are a limited number of NEP sites in Massachusetts, as NEPs currently exist in Boston, Cambridge, Provincetown, and Northampton.

Respondents were asked whether or not they would have purchased needles/syringes in a pharmacy or drug store if it were legal to make such a purchase (Figure 1). Eighty-three percent of IDUs reported that they would have purchased needles in a pharmacy, if it were legal to do so.

The simultaneous repeal of needle/syringe prescription and drug paraphernalia/possession laws in Connecticut in July 1992 allowed pharmacists to sell, and individuals to possess, up to 10 clean needles or syringes. The CDC evaluated the impact of the new legislation and found that fewer IDUs reported purchasing syringes on the street (74% before vs. 28% after), and more IDUs reported purchasing syringes from a pharmacy (19% before vs. 78% after). Increased pharmacy sales of nonprescription syringes support these reports. More IDUs also reported obtaining syringes from needle exchange programs in Connecticut after repeal of the laws.[4]

Needle Sharing and Cleaning:

A statistically significant 95% of IDU respondents reported sharing a needle or syringe with someone at least once. This proportion was the same for males and females. Ninety-one percent (n=21) of the 23 respondents who had injected drugs in the past 5 years had shared needles/works. These findings support the "Injection Drug Use in Massachusetts" report documenting extensive needle sharing across the state (MDPH HIV/AIDS Bureau and The Mass. Prevention Planning Group, 3/97).

The literature suggests that needle sharing has evolved in response to restricted sterile needle and syringe access.[4] Despite increasing knowledge about risk, multiperson use of needles and syringes results from fear of arrest and incarceration for violation of drug paraphernalia laws that prohibit the distribution or possession of injection equipment.[5] In Connecticut, the proportion of IDUs who

[4] Groseclose SL, Weinstein B, Jones TS, Valleroy LA, Fehrs LJ, Kassler WJ. Impact of increased legal access to needles and syringes on practices of injecting-drug users and police officers-Connecticut, 1992-1993. J Acquir Immune Defic Syndr Hum Retrovirol 1995; 10(1):82-89.
[5] Vlahov D, Junge B. The role of needle exchange programs in HIV prevention. Public Health Rep 1998; 113 Suppl 1:75-80.

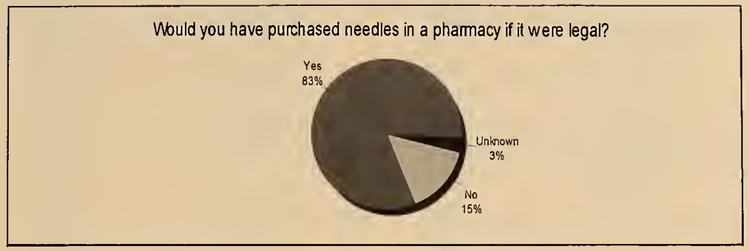


**Figure 1**

shared needles/syringes has decreased from 71% in 1992 (before the legal restrictions were lifted) to 29% in 1995.[6]

Cleaning needles and syringes with bleach has been promoted as a risk reduction strategy in response to needle sharing in areas with restricted access to sterile needles/syringes. Of the 21 respondents who had shared needles or syringes in the past 5 years, 100% reported cleaning them with bleach at least once. However, when asked how often needles or syringes shared in the last 5 years were cleaned with bleach, respondents reported inconsistent cleaning. (See Table 2).

**Table 2. Frequency of Cleaning with Bleach (n=21):**

| | Male | Female | Total |
|---|---|---|---|
| Sometimes | 46% | 20% | 33% |
| Usually | 18% | 40% | 29% |
| Every time | 36% | 40% | 38% |

Barriers to cleaning syringes and needles with bleach include not owning a syringe, needing to hide needles, being high and not interested in cleaning, not having disinfectant available, and being in unfamiliar surroundings.[7] Injecting in semi-public places has also been associated with decreased cleaning with bleach.[8]

In summary, injection drug use accounts for over one-third of the cumulative AIDS cases reported in Massachusetts. Availability of sterile injection equipment is limited, as only 13% of IDU respondents reported acquiring needles/syringes from a reliable source (needle exchange program or pharmacy). The majority of IDU respondents reported sharing needles or syringes. While most IDU respondents report cleaning needles/syringes with bleach at least once, bleach use was inconsistent. The majority of IDUs reported that they would have purchased needles/syringes in a pharmacy, if it were legal to make such a purchase.

[6] Diaz T, Chu SY, Weinstein B, Mokotoff E, Jones TS, et.al. Injection and syringe sharing among HIV-infected injection drug users: implications for prevention of HIV transmission. J Acquir Immune Defic Syndr Hum Retrovirol 1998; 18(Suppl 1):S76-881.

[7] Nyamathi AM, Lewis C, Leake B, Flaskerud J, Bennett C. Barriers to condom use and needle cleaning among impoverished minority female injection drug users and partners of injection drug users. Public Health Rep 1995 Mar-Apr; 110(2):166-172.
[8] Latkin C, Mandell W, Vlahov D, Oziemkowska M, Celentano D. People and places: behavioral settings and personal network characteristics as correlates of needle sharing. J Acquir Immune Defic Syndr Hum Retrovirol 1996; 13(3):273-280.



# AIDS SURVEILLANCE SUMMARY

DATA AS OF OCTOBER 1, 1999

Total Cases Reported in September, 1999 : 117

| | Boston | | Massachusetts | | Alive in State | |
|---|---|---|---|---|---|---|
| CUMULATIVE Cases reported as of: 10/1/99 | 5,007 | | 14,897 | | 6,075 | |
| | No. | % | No. | % | No. | % |
| **RESIDENCE*** | 5,007 | | 14,897 | | 6,075 | |
| City of Boston | 4,979 | 99% | 4,979 | 33% | 1,902 | 31% |
| Remainder of Boston SMSA** | N/A | | 3,808 | 26% | 1,492 | 25% |
| Remainder of Massachusetts | N/A | | 5,470 | 37% | 2,305 | 38% |
| Subtotal | 4,979 | 99% | 14,257 | 96% | 5,699 | 94% |
| Prisoners*** | 28 | 1% | 640 | 4% | 376 | 6% |
| **TRANSMISSION MODE** (adults) | 4,946 | | 14,684 | | 5,986 | |
| Male Sex w/Male | 2,425 | 49% | 5,810 | 40% | 1,845 | 31% |
| Injecting Drug User | 1,307 | 26% | 5,106 | 35% | 2,268 | 38% |
| Male/Male Sex & IDU | 180 | 4% | 574 | 4% | 201 | 3% |
| Receipt of blood/products | 77 | 2% | 374 | 3% | 123 | 2% |
| Heterosexual**** | 397 | 8% | 1,363 | 9% | 733 | 12% |
| Undetermined****/Other | 560 | 11% | 1,457 | 10% | 816 | 14% |
| **TRANSMISSION MODE** (pediatric) | 61 | | 213 | | 89 | |
| Mother w/AIDS/at risk for HIV | 53 | 87% | 182 | 85% | 77 | 87% |
| Receipt of blood/products | 6 | 10% | 25 | 12% | 7 | 8% |
| Undetermined**** | 2 | 3% | 6 | 3% | 5 | 6% |
| **GENDER** | 5,007 | | 14,897 | | 6,075 | |
| Male | 4,147 | 83% | 11,944 | 80% | 4,566 | 75% |
| Female | 860 | 17% | 2,953 | 20% | 1,509 | 25% |
| **RACE/ETHNICITY** | 5,007 | | 14,897 | | 6,075 | |
| White | 2,459 | 49% | 8,455 | 57% | 2,934 | 48% |
| Black | 1,911 | 38% | 3,536 | 24% | 1,605 | 26% |
| Hispanic | 591 | 12% | 2,786 | 19% | 1,471 | 24% |
| Other/Unknown | 46 | 1% | 120 | 1% | 65 | 1% |
| **AGE GROUP (years)** | 5,007 | | 14,897 | | 6,075 | |
| Under 13 | 58 | 1% | 199 | 1% | 80 | 1% |
| 13 - 19 | 9 | 0% | 56 | 0% | 31 | 1% |
| 20 - 29 | 830 | 17% | 2,446 | 16% | 981 | 16% |
| 30 - 39 | 2,472 | 49% | 7,227 | 49% | 2,918 | 49% |
| 40 - 49 | 1,244 | 25% | 3,802 | 26% | 1,636 | 27% |
| Over 49 | 394 | 8% | 1,167 | 8% | 429 | 7% |

* In the past, the AIDS Surveillance Program received case reports on some out-of-state residents diagnosed in MA. These cases were incorporated into our database and listed as out-of-state cases. As of 10/1/96, in keeping with current CDC guidelines, these cases will no longer be included in our database.

** Refers to the most recent Boston Standard Metropolitan Statistical Area;

*** Cases diagnosed while in prison.

**** Heterosexual cases formerly based on Pattern II criteria now classified as "Undetermined."

## MASSACHUSETTS AIDS CASES BY GENDER AND RACE/ETHNICITY

*Cumulative Cases Reported as of 10/1/99*

| MALES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MODE OF TRANSMISSION | WHITE | | 8LACK | | HISPANIC | | TOTAL* | |
| | No. | % | No. | % | No. | % | No. | % |
| Male Sex w/Male | 4,863 | 66% | 533 | 22% | 358 | 17% | 5,810 | 49% |
| Injecting Drug User (IDU) | 1,379 | 19% | 1,018 | 42% | 1,308 | 63% | 3,725 | 31% |
| Male/Male Sex & IDU | 394 | 5% | 100 | 4% | 78 | 4% | 574 | 5% |
| Receipt of blood/products | 212 | 3% | 25 | 1% | 21 | 1% | 262 | 2% |
| Heterosexual: | 128 | 2% | 175 | 7% | 109 | 5% | 414 | 3% |
| Sex w/IDU | 59 | 1% | 58 | 2% | 27 | 1% | 144 | 1% |
| Sex w/recpt of bld/prdts. | 3 | 0% | 3 | 0% | 1 | 0% | 7 | 0% |
| Sex w/HIV/AIDS | 66 | 1% | 114 | 5% | 81 | 4% | 263 | 2% |
| Undetermined: | 327 | 4% | 521 | 22% | 170 | 8% | 1,037 | 9% |
| Presumed Hetero-Unk Risk of Prtnr* | 130 | 2% | 323 | 13% | 92 | 4% | 550 | 5% |
| Other Undetermined** | 197 | 3% | 198 | 8% | 78 | 4% | 487 | 4% |
| Pediatric | 39 | 1% | 49 | 2% | 33 | 2% | 122 | 1% |
| Total Male (% of all cases)* | 7,342 | 61% | 2,421 | 20% | 2,077 | 17% | 11,944 | 100% |

| FEMALES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MODE OF TRANSMISSION | WHITE | | 8LACK | | HISPANIC | | TOTAL* | |
| | No. | % | No. | % | No. | % | No. | % |
| Injecting Drug User (IDU) | 655 | 59% | 434 | 39% | 287 | 40% | 1,381 | 47% |
| Receipt of blood/products | 60 | 5% | 32 | 3% | 17 | 2% | 112 | 4% |
| Heterosexual: | 284 | 26% | 341 | 31% | 319 | 45% | 949 | 32% |
| Sex w/IDU | 152 | 14% | 146 | 13% | 214 | 30% | 514 | 17% |
| Sex w/Bi Male | 23 | 2% | 8 | 1% | 4 | 1% | 35 | 1% |
| Sex w/recpt of bld/prdts. | 18 | 2% | 5 | 0% | 3 | 0% | 26 | 1% |
| Sex w/HIV/AIDS | 91 | 8% | 182 | 16% | 98 | 14% | 374 | 13% |
| Undetermined | 91 | 8% | 270 | 24% | 56 | 8% | 420 | 14% |
| Presumed Hetero-Unk Risk of Prtnr* | 66 | 6% | 214 | 19% | 37 | 5% | 319 | 11% |
| Other Undetermined*** | 25 | 2% | 56 | 5% | 19 | 3% | 101 | 3% |
| Pediatric | 23 | 2% | 38 | 3% | 30 | 4% | 91 | 3% |
| Total Female (% of all cases) | 1,113 | 38% | 1,115 | 38% | 709 | 24% | 2,953 | 100% |

| TOTAL CASES | 8,455 | 3,536 | 2,786 | 14,897 |
|---|---|---|---|---|

*Total includes other and unknown races and those with confirmed occupational exposures.
**Risk of partner is unknown and primary risk categories have been denied; definition revised 7/1/99.
***Includes: those w/ other undetermined risks, those who refused follow-up interview, those who have died with no determined risk, & those who have been lost to follow-up.

## TRENDS IN MASSACHUSETTS AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS

*Cumulative Cases reported as of 10/1/99*

| Transmission Mode | < = 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 2406 | 54% | 544 | 41% | 648 | 37% | 617 | 35% | 451 | 31% | 391 | 30% | 285 | 28% | 199 | 26% | 173 | 23% | 5810 | 39% |
| Injecting Drug User | 1060 | 24% | 480 | 36% | 680 | 39% | 694 | 40% | 565 | 39% | 547 | 42% | 402 | 40% | 290 | 38% | 262 | 35% | 5106 | 34% |
| MSM & IDU | 202 | 5% | 59 | 4% | 65 | 4% | 73 | 4% | 56 | 4% | 52 | 4% | 25 | 2% | 19 | 3% | 16 | 2% | 574 | 4% |
| Rec. of blood/prod. | 164 | 4% | 37 | 3% | 63 | 4% | 34 | 2% | 12 | 1% | 18 | 1% | 19 | 2% | 13 | 2% | 12 | 2% | 374 | 3% |
| Heterosexual | 205 | 4% | 90 | 7% | 153 | 6% | 163 | 8% | 197 | 9% | 158 | 14% | 154 | 12% | 112 | 15% | 95 | 16% | 1363 | 8% |
| Sex w/IDU | 139 | 3% | 50 | 4% | 76 | 4% | 81 | 5% | 91 | 6% | 63 | 5% | 66 | 7% | 41 | 5% | 38 | 5% | 658 | 4% |
| Sex w/Bi Male | 10 | 0% | 5 | 0% | 4 | 0% | 5 | 0% | 7 | 0% | 2 | 0% | 0 | 0% | 1 | 0% | 1 | 0% | 35 | 0% |
| Sex w/bld/prdt recip. | 6 | 0% | 3 | 0% | 3 | 0% | 6 | 0% | 3 | 0% | 2 | 0% | 6 | 1% | 2 | 0% | 1 | 0% | 33 | 0% |
| Sex w/HIV/AIDS | 50 | 1% | 32 | 2% | 70 | 4% | 71 | 4% | 96 | 7% | 91 | 7% | 82 | 8% | 68 | 9% | 55 | 7% | 637 | 4% |
| Undetermined/Other | 317 | 7% | 98 | 8% | 106 | 8% | 142 | 6% | 140 | 8% | 136 | 10% | 111 | 11% | 120 | 12% | 183 | 17% | 1457 | 9% |
| Presumed Hetero-Un risk of partner**** | 230 | 5% | 67 | 5% | 71 | 4% | 73 | 4% | 62 | 4% | 67 | 5% | 63 | 6% | 69 | 9% | 119 | 16% | 836 | 6% |
| Other Undeter/Other* | 87 | 2% | 31 | 2% | 35 | 2% | 69 | 4% | 78 | 5% | 69 | 5% | 48 | 5% | 51 | 7% | 64 | 9% | 561 | 4% |
| Pediatric | 95 | 2% | 21 | 2% | 20 | 1% | 21 | 1% | 15 | 1% | 16 | 1% | 16 | 2% | 4 | 1% | 4 | 1% | 213 | 1% |
| TOTAL (% of total) | 4449 | (30%) | 1329 | (9%) | 1735 | (12%) | 1744 | (12%) | 1436 | (10%) | 1318 | (9%) | 1012 | (7%) | 757 | (5%) | 745 | (5%) | 14897 | (100%) |

## TRENDS IN BOSTON AIDS CASES BY RISK FACTOR AND YEAR OF DIAGNOSIS*

*Cumulative Cases reported as of 10/1/99*

| Transmission Mode | < = 1990 | | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Male Sex w/Male | 1100 | 60% | 239 | 53% | 279 | 48% | 226 | 43% | 182 | 43% | 138 | 39% | 99 | 35% | 65 | 33% | 68 | 29% | 2422 | 49% |
| Injecting Drug User | 355 | 19% | 120 | 26% | 191 | 33% | 178 | 34% | 114 | 27% | 103 | 29% | 87 | 31% | 55 | 28% | 66 | 28% | 1286 | 26% |
| MSM & IDU | 73 | 4% | 22 | 5% | 19 | 3% | 17 | 3% | 16 | 4% | 20 | 6% | 6 | 2% | 0 | 0% | 4 | 2% | 179 | 4% |
| Rec. of blood/prod. | 34 | 2% | 9 | 2% | 10 | 2% | 6 | 1% | 1 | 0% | 4 | 1% | 5 | 2% | 3 | 2% | 4 | 2% | 77 | 2% |
| Heterosexual | 63 | 3% | 20 | 4% | 41 | 4% | 44 | 6% | 60 | 9% | 42 | 13% | 44 | 14% | 44 | 14% | 26 | 24% | 396 | 7% |
| Sex w/IDU | 45 | 2% | 11 | 2% | 13 | 2% | 23 | 4% | 25 | 6% | 14 | 4% | 12 | 4% | 10 | 5% | 9 | 4% | 164 | 3% |
| Sex w/Bi Male | 1 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 2 | 0% | 0 | 0% | 0 | 0% | 1 | 1% | 0 | 0% | 5 | 0% |
| Sex w/bld/prdt recip. | 0 | 0% | 1 | 0% | 1 | 0% | 1 | 0% | 0 | 0% | 0 | 0% | 1 | 0% | 0 | 0% | 0 | 0% | 4 | 0% |
| Sex w/HIV/AIDS | 17 | 1% | 8 | 2% | 27 | 5% | 19 | 4% | 33 | 8% | 28 | 8% | 31 | 11% | 33 | 17% | 17 | 7% | 223 | 4% |
| Undetermined/Other | 171 | 9% | 36 | 12% | 39 | 8% | 55 | 7% | 44 | 11% | 42 | 11% | 39 | 11% | 32 | 13% | 67 | 19% | 558 | 10% |
| Presumed Hetero-Un risk of partner**** | 131 | 7% | 28 | 6% | 30 | 5% | 32 | 6% | 17 | 4% | 23 | 7% | 21 | 7% | 17 | 9% | 47 | 20% | 372 | 7% |
| Other Undeter/Other* | 40 | 2% | 8 | 2% | 9 | 2% | 23 | 4% | 27 | 6% | 19 | 5% | 18 | 6% | 15 | 8% | 20 | 9% | 186 | 4% |
| Pediatric | 31 | 2% | 8 | 2% | 4 | 1% | 5 | 1% | 5 | 1% | 3 | 1% | 5 | 2% | 0 | 0% | 0 | 0% | 61 | 1% |
| TOTAL (% of total) | 1827 | (37%) | 454 | (9%) | 583 | (12%) | 531 | (11%) | 422 | (8%) | 352 | (7%) | 285 | (6%) | 199 | (4%) | 235 | (5%) | 4979 | (100%) |

* Boston cases do not include prisoners.
** Includes: those with other undetermined risks, those who refused follow-up interview, those have died with no determined risk, those lost to follow-up, and those w/confirmed occupational risk
***Row totals include cases diagnosed in 1999.

## RESOURCES

### *A Message to Health Care Providers*

AIDS is designated as a reportable condition by regulation (105 CMR 300,000 et seq).
All health care providers diagnosing a new case of AIDS must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

As of January 1, 1999, an amendment to the reportable disease regulations (105 CMR 300) has been adopted to include HIV infection as a notifiable disease reportable directly to the Department of Public Health using a non-name based system; *no names will be reported*. The Adult AIDS Confidential Case Report Form has been updated to include HIV infection information. This single form is to be used to report both HIV infection (without AIDS-defining conditions) and AIDS cases.

HIV/AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. HIV/AIDS case information is held in strict confidence. Please feel free to call the HIV/AIDS Surveillance Program at (617) 983-6560 with any questions about case reporting.

For **case reporting** of HIV/AIDS patients meeting the CDC definition, please notify AIDS Epidemiologists (617) 983-6560

Massachusetts Department of Public Health
305 South Street
Jamaica Plain, MA 02130-3597

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# Massachusetts HIV/AIDS Review

**Spring 2001**

*A newsletter of the HIV/AIDS Bureau and HIV/AIDS Surveillance Program*

## HIV in Massachusetts: An Update

The number of people diagnosed with AIDS in Massachusetts each year has decreased since the mid-1990s. While this is a most welcome development for people living with HIV infection, it has become increasingly difficult to use AIDS data to examine trends in the HIV epidemic. For this reason, Massachusetts implemented a non-name HIV surveillance system after a process with significant community participation. The system went into effect on January 1, 1999 and gathers data that allow for better targeting and evaluation of HIV prevention and treatment services.

This overview of people living with HIV/AIDS in Massachusetts presents information on statewide and Health Service Region (HSR) levels, as well as for selected cities. The data include people reported to the HIV/AIDS surveillance system as of April 1, 2001. Cumulative and prevalent numbers of cases, as well as cases diagnosed in 1999, are reported. Charts contain information about people living with HIV infection, people living with AIDS, and both groups together.

With only one year of incident data on HIV infection, we cannot compare people diagnosed with HIV infection in 1999 to those diagnosed in each year prior to 1999. However people diagnosed with HIV infection in 1999 are compared with people diagnosed with HIV infection prior to 1999 (combined in one 'pre-1999, category) and all people diagnosed with AIDS as of April 1, 2001.

This report is a summary of the data collected through the HIV/AIDS Surveillance Program. For more complete data, including copies of presentation slides, please visit our website at: www.state.ma.us/dph/cdc/aids/aidsprog.htm

**Total Number of People Reported**

As of April 1, 2001, 5,525 people with HIV infection and 16,438 people with AIDS had been reported to the surveillance program. The cumulative number of people reported with HIV/AIDS is 21,963.

**People Living with HIV Infection and AIDS**

**Table 1** shows the demographic characteristics of people living with HIV infection, AIDS and HIV/AIDS in Massachusetts, and by HSR and mode of exposure to HIV.

As of April 1, 2001, 5,480 people were living with HIV infection and 7,173 people were living with AIDS, for a total of 12,653 people living with HIV/AIDS.

***Residence***

While 35% of the state's population lives in the Boston and Metrowest HSRs, 44% of the Massachusetts residents living with HIV/AIDS live in the two HSRs. These two HSRs

Table 1: Massachusetts Residents Living with HIV Infection, AIDS and HIV/AIDS as of April 1, 2001.

| | Living with HIV Infection | | Living with AIDS | | Living with HIV/AIDS | |
|---|---|---|---|---|---|---|
| | 5,480 | | 7,173 | | 12,653 | |
| | No. | % | No. | % | No. | % |
| **HSR‡** | | | | | | |
| Boston | 1,686 | 31% | 2,355 | 33% | 4,041 | 32% |
| Central | 482 | 9% | 628 | 9% | 1,110 | 9% |
| Metrowest | 669 | 12% | 870 | 12% | 1,539 | 12% |
| Northeast | 716 | 13% | 1,020 | 14% | 1,736 | 14% |
| Southeast | 782 | 14% | 994 | 14% | 1,776 | 14% |
| Western | 642 | 12% | 827 | 12% | 1,469 | 12% |
| Prison‡‡ | 491 | 9% | 479 | 7% | 970 | 8% |
| **Mode of Exposure** | | | | | | |
| MSM* | 1,812 | 33% | 2,160 | 30% | 3,972 | 32% |
| IDU** | 1,780 | 32% | 2,587 | 36% | 4,367 | 35% |
| MSM&IDU | 177 | 3% | 233 | 3% | 410 | 3% |
| Blood | 23 | 0% | 119 | 2% | 142 | 1% |
| Heterosexual | 683 | 12% | 903 | 13% | 1,586 | 13% |
| Pres. Hetero*** | 702 | 13% | 794 | 11% | 1,496 | 12% |
| Undet./Other | 303 | 6% | 292 | 4% | 595 | 5% |
| **Gender** | | | | | | |
| Male | 3,792 | 69% | 5,334 | 74% | 9,126 | 72% |
| Female | 1,688 | 31% | 1,839 | 26% | 3,527 | 28% |
| **Race/ Ethnicity** | | | | | | |
| White | 2,743 | 50% | 3,442 | 48% | 6,185 | 49% |
| Black | 1,279 | 23% | 1,908 | 27% | 3,187 | 25% |
| Hispanic | 1,349 | 25% | 1,737 | 24% | 3,086 | 24% |
| Other | 109 | 2% | 86 | 1% | 195 | 2% |
| **Age at Diagnosis** | | | | | | |
| <13† | -- | | 74 | 1% | | |
| 13-19 | 71 | 1% | 39 | 1% | | |
| 20-29 | 1,271 | 23% | 1,075 | 15% | | |
| 30-39 | 2542 | 46% | 3,452 | 48% | | |
| 40-49 | 1,270 | 23% | 2,003 | 28% | | |
| 50+ | 327 | 6% | 530 | 7% | | |

‡ HSR: See http://www.state.ma.us/dph/chna/config.htm for configuration.
‡‡ Individuals diagnosed while in prison.
*Men who have sex with men.
**Injection Drug Use.
***Presumed Heterosexual: Risk of partner(s) is unknown and other primary risk categories have been denied.
† Data on Pediatric HIV infection are collected as part of a special project, the Pediatric Spectrum of Disease Project.

combined have the highest prevalence of HIV/AIDS in the state.

**Figure I** shows the proportions of people living with HIV infection, AIDS and HIV/AIDS in Massachusetts by HSR.

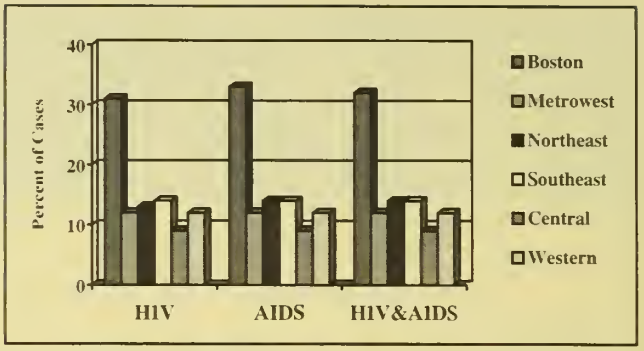



Figure I: People living with HIV infection, AIDS and HIV/AIDS by Health Service Region.

## Gender

A larger proportion of people living with HIV infection (31%) compared with people living with AIDS (26%) in Massachusetts are female.

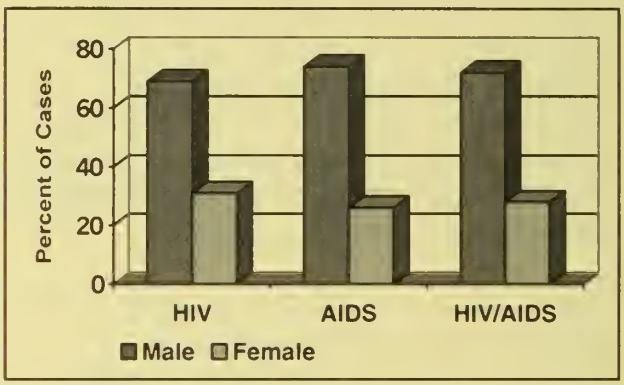



Figure II: People living with HIV infection, AIDS and HIV/AIDS in Massachusetts by Gender.

**Figure II** shows the proportions of people living with HIV infection, AIDS and HIV/AIDS in Massachusetts by gender.

The Western HSR has a higher proportion of women living with HIV infection (44%), AIDS (32%) and HIV/AIDS (37%) than any other region in the state.

Women account for at least 30% of people living with HIV/AIDS in the cities of Brockton (35%), Fall River (54%), Lawrence (43%), Lynn (36%), New Bedford (42%), Somerville (30%), Springfield (37%) and Worcester (41%). In Fall River and Holyoke, women

predominate among people living with HIV infection, 59% and 54%, respectively.

*Race/Ethnicity*

The impact of the HIV/AIDS epidemic on communities of color is disproportionate to overall representation in the population of Massachusetts. People of color make up 15% of the state's population, but 50% of the people living with HIV/AIDS.

**Figure III** shows race/ethnicity of people living with HIV infection, AIDS and HIV/AIDS in Massachusetts.

Hispanics comprise 25% of people living with HIV infection and 24% of people living with AIDS. Blacks comprise 23% of people living with HIV infection and 26% of people living with AIDS.

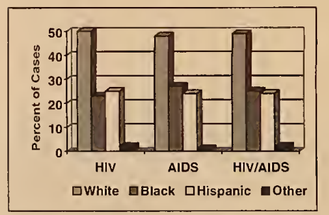



Figure III: People living with HIV infection, AIDS and HIV/AIDS in Massachusetts by Race/Ethnicity.

In the Western HSR, 72% of people living with HIV infection are people of color. People of color are also the largest proportion of people living with HIV infection in the city of Boston (52%), in Holyoke (86%), in Lawrence (88%) and in Springfield (82%).

*Mode of Exposure*

IDU and MSM are the predominant modes of exposure to HIV infection in Massachusetts.

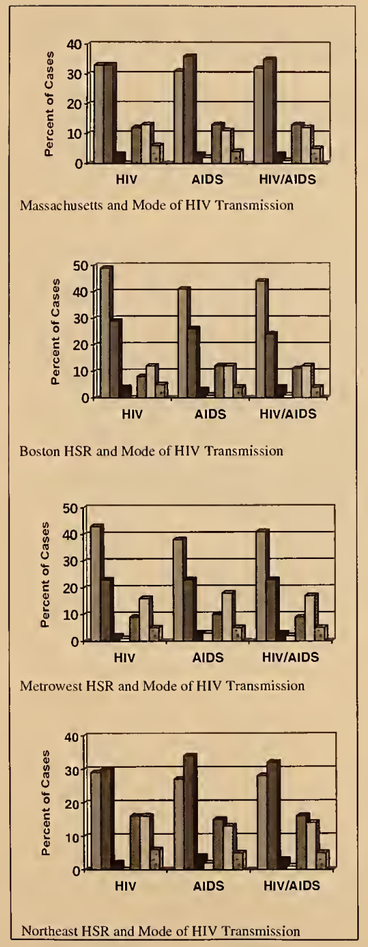
**Figure IV** shows mode of exposure to HIV at the state level and by HSR. The Southeast and Northeast HSRs resemble the whole state with respect to exposure. In the Metrowest and Boston HSRs, MSM is the primary reported mode of exposure to HIV, whereas in the Western and Central HSRs, IDU is the primary reported mode of exposure to HIV.

In terms of mode of exposure to HIV by gender at the state level, 48% of men living with HIV infection are reported with MSM as their mode of exposure to HIV, 30% are reported with IDU as their primary risk and 4% have heterosexual contact as their reported risk for acquiring HIV infection.

For women, at state level, 38% living with HIV infection are reported with their own injecting drug use as mode of exposure to HIV, 31% are reported with heterosexual contact as risk for HIV infection and 24% are classified as presumed heterosexual. By race/ethnicity and gender, white men living with HIV infection are more likely than either black men or Hispanic men living with HIV infection to have been reported with MSM as their mode of exposure to HIV (66%, 24% and 24% respectively). Hispanic men (53%) and black men (38%) are more likely to have been reported with IDU as their risk for HIV infection. White women are more likely to be reported as having been exposed to HIV through their own injecting drug use than black or Hispanic women (54%, 25% and 31% respectively). Hispanic women are reported with heterosexual exposure more frequently than white women and black women (45%, 34% and 25% respectively).

**People Diagnosed with HIV Infection and AIDS in 1999**

As of April 1, 2001, 715 people diagnosed with HIV infection in 1999 were reported to the HIV/AIDS Surveillance Program and of these,



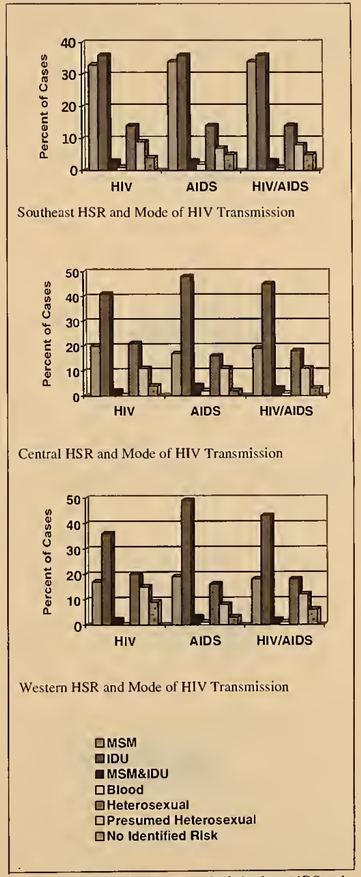




Figure IV: People living with HIV infection, AIDS and HIV/AIDS by mode of exposure to HIV at state and Health Service Region levels.

708 are people living with HIV infection. As of the same date, 862 people diagnosed with AIDS in 1999 were reported, and 804 are people living with AIDS.

People living with HIV infection provide information about recent trends in the HIV/AIDS epidemic in the state. The data presented here compare people diagnosed with HIV infection in 1999 with everyone else reported with HIV/AIDS (pre-1999 HIV infection and all AIDS).

*Gender*

**Figure V** shows that women comprised 35% of the people diagnosed with HIV infection in

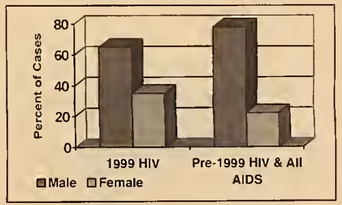



Figure V: People diagnosed with HIV infection in 1999 compared to people diagnosed with HIV infection pre-1999 combined with all people diagnosed with AIDS by gender.

1999, and 27% of all other people living with HIV/AIDS (pre-1999 HIV infection diagnoses and all AIDS).

*Race/Ethnicity*

As shown in **Figure VI**, nearly 60% of people diagnosed with HIV infection in 1999 were from communities of color (29% and 27% respectively for blacks and Hispanics).

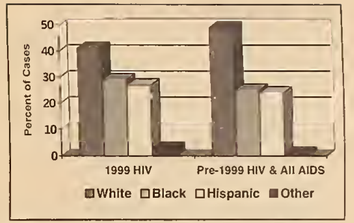



Figure VI: People diagnosed with HIV infection in 1999 compared to people diagnosed with HIV infection pre-1999 combined with all people diagnosed with AIDS by race/ethnicity.

*Mode of Exposure*

As **Figure VII** shows, IDU and MSM remain the primary modes of exposure to HIV reported in Massachusetts. Nearly 60% of the people newly diagnosed with HIV infection in 1999

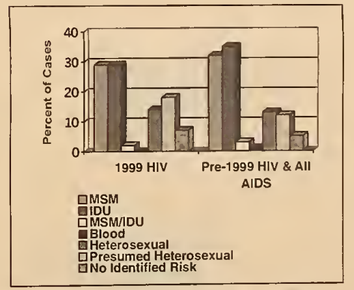



Figure VII: People diagnosed with HIV infection in 1999 compared to people diagnosed with HIV infection pre-1999 combined with all people diagnosed with AIDS by mode of exposure to HIV.

were reported with IDU, MSM and MSM/IDU as their risk for HIV infection.

It is important to note that 25% of the people diagnosed with HIV infection in 1999 were not reported with a CDC-defined risk. Missing risk information is more common in reports on people of color. Among blacks, 29% of men and 63% of women were reported without a CDC-defined risk. Among Hispanics, 23% of men and 31% of women were reported without a CDC-defined risk. Risk information is important for surveillance purposes, particularly for evaluation and validation of the data generated by the non-name system. Risk information collected through surveillance also plays an important role in developing appropriate prevention programs, providing essential information needed for decision making and planning.

Gender-specific risk information provides a more detailed picture of risk behavior in the HIV/AIDS epidemic and can allow for better targeting of intervention programs aimed at risk or harm reduction.

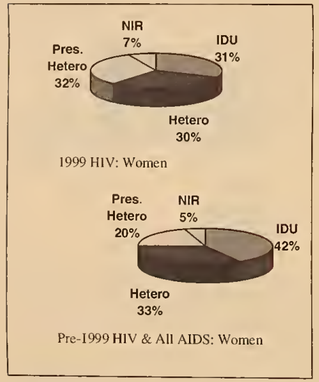



Figure VIII: Women diagnosed with HIV infection in 1999 compared to women diagnosed with HIV infection pre-1999 combined with all women diagnosed with AIDS by risk.

**Figure VIII** compares women diagnosed with HIV infection in 1999 to women diagnosed with AIDS in 1999 combined with all women diagnosed with HIV/AIDS pre-1999 by mode of exposure to HIV. There was a decrease in the proportion of women diagnosed with HIV infection attributed to IDU in 1999, with an increase in proportions with heterosexual contact and presumed heterosexual contact as reported modes of exposure.

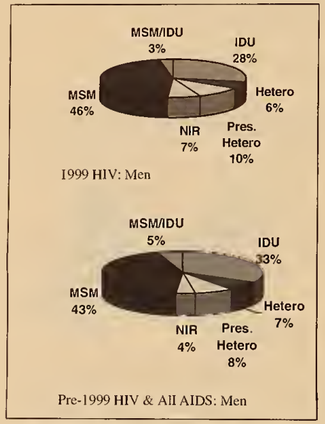



Figure IX: Men diagnosed with HIV infection in 1999 compared to men diagnosed with HIV infection pre-1999 combined with all men diagnosed with AIDS by risk.

**Figure IX** compares mode of exposure to HIV for men diagnosed with HIV infection in 1999 with men diagnosed with AIDS in 1999 combined with all men diagnosed with HIV/AIDS pre-1999. There was a decrease in the proportion of men with HIV infection attributed to IDU and MSM/IDU, with a slight increase in the MSM, heterosexual and presumed heterosexual modes of exposure for men diagnosed with HIV infection in 1999.



As already noted, the impact of the HIV/AIDS epidemic is more pronounced among people of color than among white people.

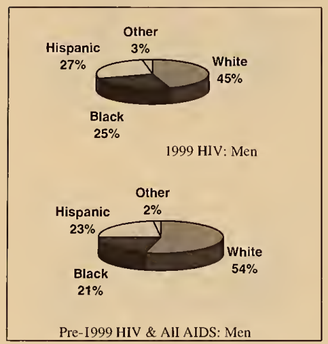



Figure X: Men diagnosed with HIV infection in 1999 compared to men diagnosed with HIV infection pre-1999 combined with all men diagnosed with AIDS by race/ethnicity.

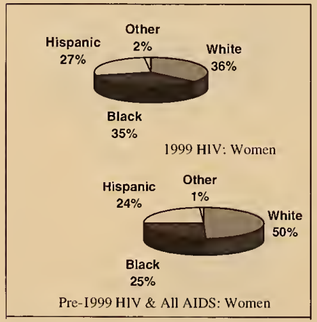



Figure XI: Women diagnosed with HIV infection in 1999 compared to women diagnosed with HIV infection pre-1999 combined with all women diagnosed with AIDS by race/ethnicity.

**Figures X-XI** provide a picture of the gender-specific impact of the HIV/AIDS epidemic in Massachusetts by race/ethnicity.

Among men diagnosed with HIV infection in 1999, 55% are men of color (25% black and 27% Hispanic). Among women diagnosed with HIV infection in 1999, 64% are women of color (35% black and 27% Hispanic)

### *Residence*

Over 40% of the people diagnosed with HIV infection in 1999 lived in metropolitan Boston (Boston and the Metrowest HSR, including Cambridge and Somerville) at the time of their diagnosis. Thirteen percent of the cases were reported during incarceration in either a county or state correctional facility. In 1999, only 5% of the cases were reported from Central Massachusetts, compared to 9% of people currently alive and diagnosed with HIV infection before the implementation of HIV surveillance. This will be monitored to determine if it is a trend or a one-year fluctuation.

*(Much of the above text was abstracted from EPIDEMIOLOGICAL PROFILE 2000. The full document can be obtained from the HIV/AIDS Bureau: (617) 624 5300 or HIV/AIDS Surveillance Program: (617) 983 6560)*



A Message to Health Care Providers

AIDS is designated as a reportable condition by regulation (105 CMR 300.000 et seq.). All health care providers diagnosing an AIDS case must report that case directly to the Massachusetts Department of Public Health (MDPH). Accurate information on the incidence and clinical manifestations of AIDS is crucial for monitoring trends in the epidemic and for determining allocation of resources.

As of January 1, 1999, an amendment to the reportable disease regulations (105 CMR 300) was adopted to include **HIV infection** as a notifiable condition reportable directly to the Department of Public Health using a non-name based system: ***no names are reported***. The Adult AIDS Confidential Case Report Form was updated to include HIV infection information. This single form is to be used to report both HIV infection (without AIDS-defining conditions) and AIDS cases.

HIV/AIDS case information is protected by state and federal laws governing confidentiality of medical and surveillance information. No names are ever released to anyone. HIV/AIDS case information is held in strict confidence. For **case reporting** of HIV/AIDS patients meeting the CDC definition, please contact AIDS Epidemiologists at: (617) 983-6560.

HIV/AIDS Surveillance Program
Massachusetts Department of Public Health
305 South Street
Jamaica Plain, MA 02130-3597

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